

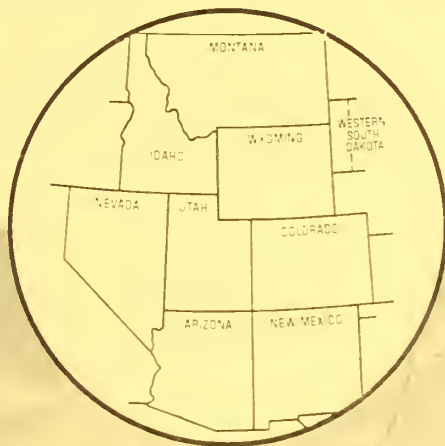
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# TIMBER PRODUCTS IN THE ROCKY MOUNTAIN STATES, 1966



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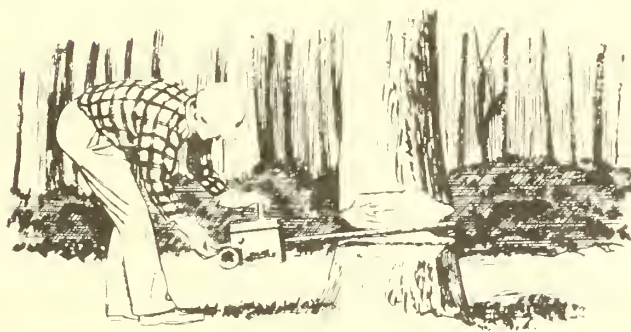
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# TIMBER PRODUCTS IN THE ROCKY MOUNTAIN STATES, 1966

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## ABSTRACT

Reports findings of the second comprehensive survey of output of timber products in the Rocky Mountain States. Presents statistics on production of saw logs, veneer logs, pulpwood, and various other roundwood products by States and land ownership classes. Also shows saw-log production by county and volumes of plant byproducts and plant residues. Makes comparisons with 1962 output and indicates trends since 1952. Estimates are given of total removals from growing stock and sawtimber in 1966.



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# **FOREWORD**

This report summarizes information resulting from a survey of the 1966 output of timber products in the Rocky Mountain States.<sup>1</sup> The survey was conducted in 1967 by the Forest Survey Project of the Intermountain Forest and Range Experiment Station, USDA Forest Service, as part of the continuing nationwide Forest Survey.

In addition to providing estimates of roundwood production from timberlands in each State, statistics are given on the following: number of sawmills, veneer and plywood plants, and papermills; volumes of plant byproducts and plant residues; interstate movement of roundwood; lumber production (U.S. Bureau of the Census estimates); and total removals from growing stock inventory.

Data for previous years and in trend discussions and comparisons came from a number of publications. Information for 1962 came largely from three sources: "Timber Resources and Industries in the Rocky Mountain States" (Wilson and Spencer 1967);<sup>2</sup> "Timber Trends in the United States" (U.S. Forest Service 1965); and a series of reports published in 1964 (Wilson, Spencer, and Spencer and Farrenkopf). A report "The Economic Importance of Timber in the United States" (Hair 1963) provides data for 1954 and 1958. "Timber Resources for America's Future" (U.S. Forest Service 1958) was the source of most of the 1952 information. A few other publications of lesser significance were used as sources of information on individual products in specific States and for certain years. Most of these publications have not been referenced in this report.

Definitions of terms, survey methods, and reliability of estimates are presented in Appendix A. Appendix B contains tables and maps showing location of active mills, and output of saw logs by production classes from individual counties.

---

<sup>1</sup>The following are called Rocky Mountain or Mountain States in this report: Idaho, Montana, South Dakota (west of the 103d meridian), Wyoming, Arizona, Colorado, Nevada, New Mexico, and Utah.

<sup>2</sup>Names and dates in parentheses refer to Literature Cited, p. 44.





# THE ROCKY MOUNTAIN STATES

## Roundwood products output continues to rise in Rocky Mountain States

The volume of roundwood timber products harvested in the Rocky Mountain States in 1966 totaled 810 MMCF. This is an increase of 25 percent since 1962, and 79 percent since 1952. These products include saw logs, veneer logs, round pulpwood, commercial poles, mine timbers, miscellaneous industrial wood (principally house logs, shingle bolts, and specialty logs), posts, fuelwood, and farm timbers (U.S. Bureau of Census 1967).

## Saw logs are still dominant but proportion in other products is increasing

Significant differences have occurred among individual products with respect to trends in recent years. Although output of all major products has increased, some have gone up substantially, others very little. Saw logs have maintained their predominance over the period 1952-66 and in 1966 accounted for 80 percent of the roundwood volume (figure 1).

However, since 1962 the total volume of other products has increased to a greater extent and, as shown in table 1, nearly all products have experienced a much greater percentage increase than have saw logs.

The big increase in veneer-log output primarily reflects the capacities of four new plants — one in Colorado, two in Idaho, and one in Montana. In 1952, only 8.9 MMBF<sup>3</sup> of veneer logs were produced.

Diversification of product harvest from timberlands within the Mountain States has occurred much more rapidly in some States than others. And, as shown (page 2), New Mexico is the only State in which an increase since 1962 did not occur in the proportion of total output comprised of products other than saw logs.

<sup>3</sup>International 1/4-inch log rule is used throughout this report for board-foot volumes of roundwood. Lumber production is expressed in board feet lumber tally.

Table 1. — Roundwood products output, 1962 and 1966, and percent change

| Product                                    | Unit of measure         | 1962      | 1966      | Percent change |
|--|-------------------------|-----------|-----------|----------------|
| Saw logs                                   | Thousand board feet     | 3,819,900 | 4,138,719 | 8              |
| Veneer logs                                | Thousand board feet     | 129,684   | 474,508   | 266            |
| Pulpwood                                   | Thousand standard cords | 242       | 286       | 18             |
| Commercial poles <sup>1</sup>              | Thousand pieces         | 428       | 738       | 72             |
| Posts                                      | Thousand pieces         | 3,373     | 5,817     | 72             |
| Mine timbers                               | Thousand cubic feet     | 3,170     | 6,882     | 117            |
| Miscellaneous industrial wood <sup>2</sup> | Thousand cubic feet     | 2,996     | 2,449     | -18            |
| Miscellaneous farm timbers                 | Thousand cubic feet     | 6,009     | 9,488     | 58             |
| Fuelwood                                   | Thousand standard cords | 257       | 359       | 40             |
| All products                               | Thousand cubic feet     | 649,598   | 809,792   | 25             |

<sup>1</sup>Includes a small amount of piling.

<sup>2</sup>Includes products such as house logs, converter poles, shingle bolts, excelsior bolts, match stock, charcoal wood, and similar items.

| State                  | Percentage of output in<br>products other than saw logs |           |
|------------------------|---|-----------|
|                        | 1962  | 1966      |
| Idaho                  | 6   | 18        |
| Montana                | 12  | 18        |
| Western South Dakota   | 42  | 56        |
| Wyoming                | 6   | 19        |
| Arizona                | 24  | 31        |
| Colorado               | 13  | 23        |
| Nevada                 | 52  | 99        |
| New Mexico             | 22  | 17        |
| Utah                   | 10  | 14        |
| <b>Mountain States</b> | <b>12</b>   | <b>20</b> |

Saw log exports from the Rocky Mountain States in 1966 totaled about 3 MMBF. This volume went mainly to Washington.

#### Forty-six percent of roundwood products came from ponderosa pine and Douglas-fir

Ponderosa pine, followed closely by Douglas-fir, was the most important species for roundwood products harvested in the Rocky Mountain area (figure 2). Ponderosa pine was the leading species in Arizona, New Mexico, western South Dakota, and Utah; Douglas-fir was the most important species in Idaho and Montana. Engelmann spruce led in Colorado, and lodgepole pine in Wyoming. The 1966 product harvest from Nevada came mainly from pinyon pine and juniper cut for fuelwood and posts.

There has been no significant change in relative importance of species since 1962. However, some changes in relative proportions have occurred since 1947.<sup>4</sup> As illustrated in figure 3, ponderosa pine remains predominant and Douglas-fir has substantially increased its hold as the second-place species. Engelmann spruce and the true firs have improved their positions while western white pine and western larch have become relatively less significant.

<sup>4</sup> Although data are not available for 1947 roundwood volume by species, lumber production statistics for that year are considered closely indicative of the species breakdown of saw logs, and have provided the basis for proportioning 1947 saw-log volume for figure 3.

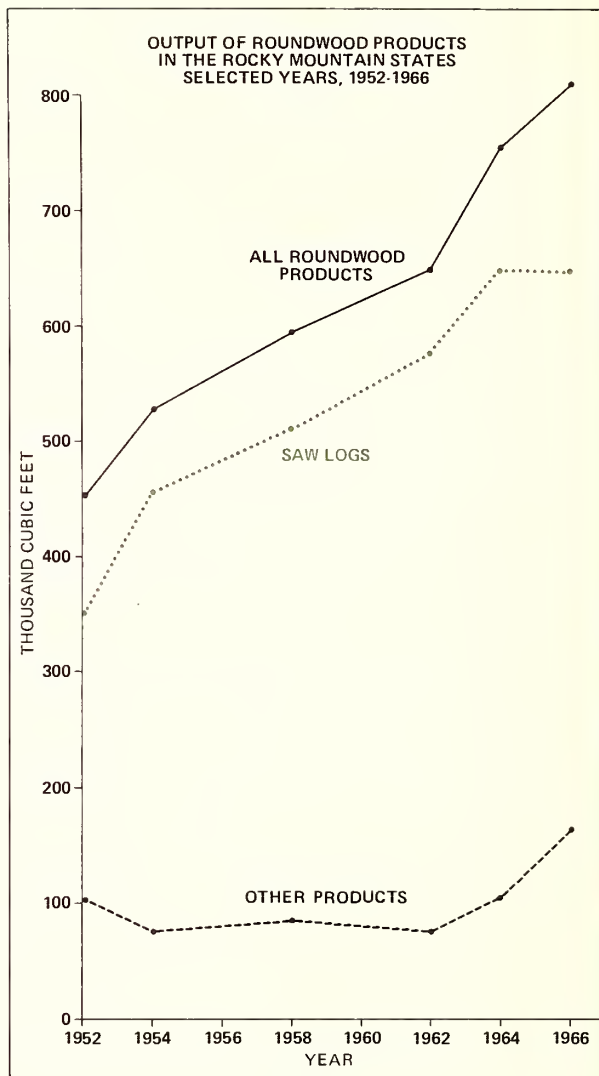
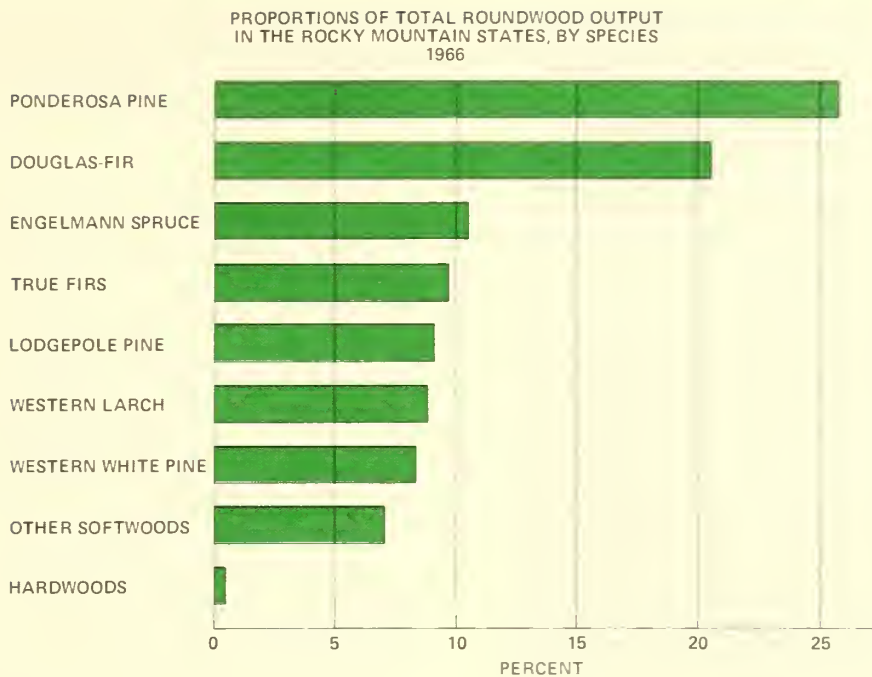


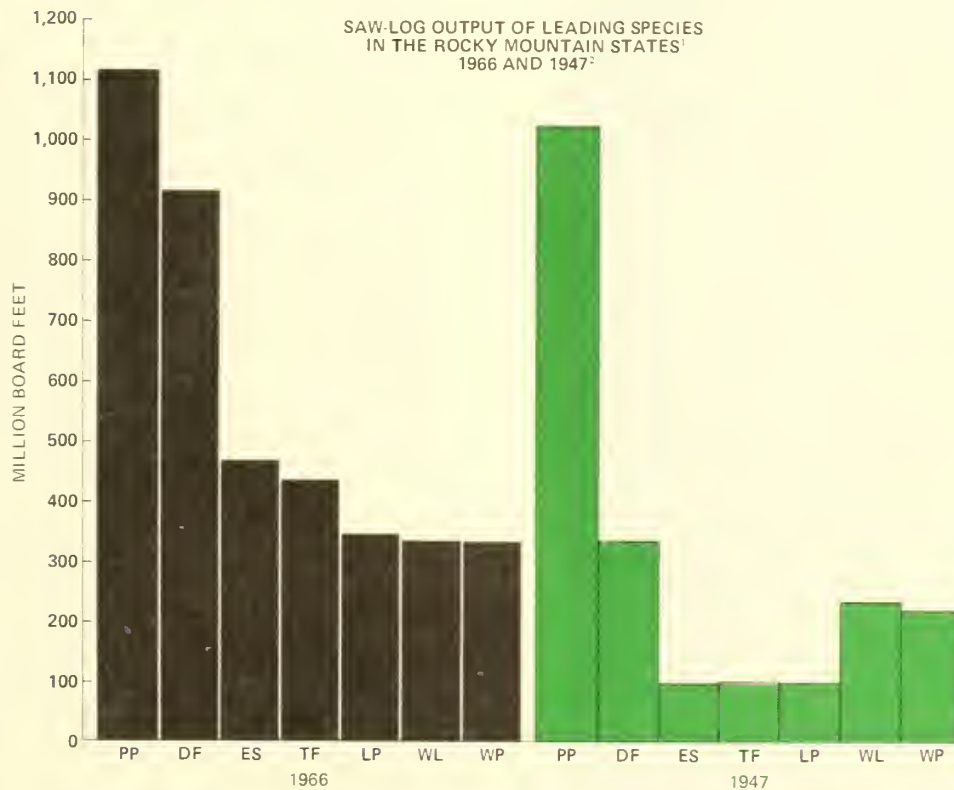
Figure 1

#### Public lands supplied 74 percent of roundwood timber products in 1966

National Forests were the prime source of timber products in all the Rocky Mountain States except Nevada and accounted for 63 percent of all roundwood products in 1966; in 1962 National Forests provided 57 percent (figure 4). In Colorado, Utah, and Wyoming, National Forests supplied over 90 percent of the roundwood timber products in 1966. In all nine States the proportion of products supplied by National Forests increased since 1962. Other public lands contributed 11 percent in 1966, the same proportion as in 1962.



*Figure 2*

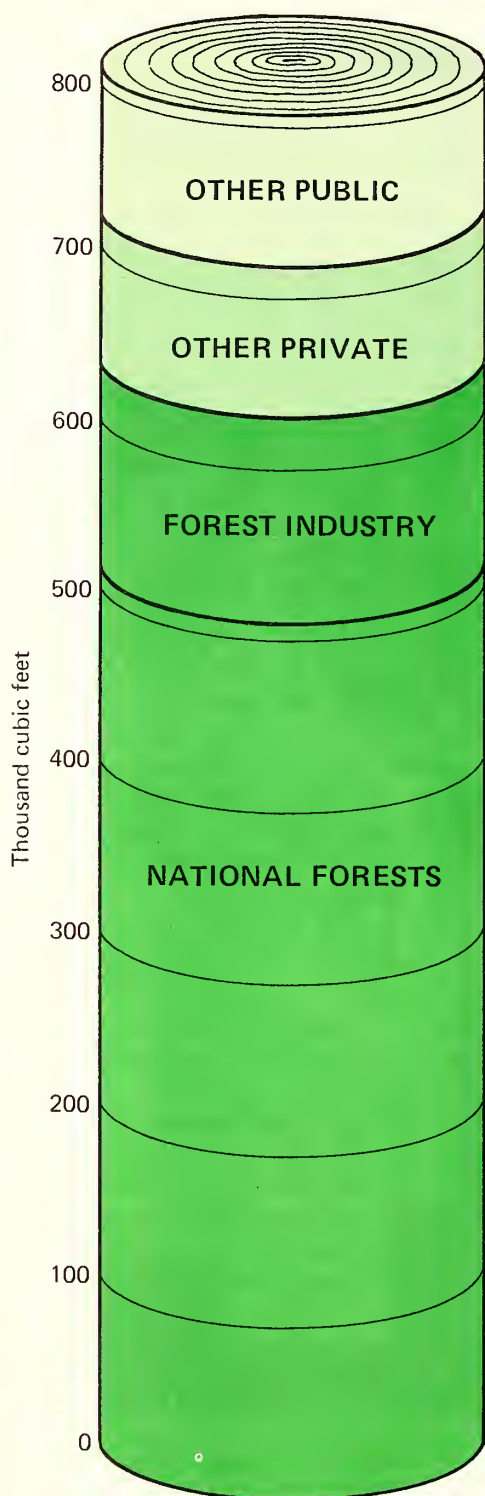


<sup>1</sup> Nevada not included

<sup>2</sup> Lumber production, 1947 Census of Manufactures, MC24A, Table 6-F

*Figure 3*

**CUBIC FOOT VOLUME OF ROUNDWOOD  
PRODUCTS BY OWNERSHIP CLASS IN THE  
ROCKY MOUNTAIN STATES, 1966**



*Figure 4*

Forest industry lands provided 15 percent of the 1966 output — not significantly different from 1962. About 11 percent came from other private lands in 1966.

**Idaho and Montana led in output  
of most roundwood products**

Idaho and Montana had the largest volume of roundwood product output and together accounted for over two-thirds of the total Rocky Mountain States output in 1966. The relative importance of States in 1966 was about the same as it had been for quite a few years, as shown in table 2.

Not all roundwood products were produced in all Mountain States, and some of them varied in relative importance from State to State. Saw logs, however, were one exception and were by far the most important product in all States except Nevada where fuelwood and posts accounted for most of the small volume of output from timberlands within the State. The percentage distribution of saw-log output by States was quite similar to that of all roundwood. Veneer logs were produced in only three States; Idaho and Montana accounted for 93 percent of the total output, the remainder came from Colorado. The pulpwood output came largely from Idaho (37 percent) and Arizona (27 percent). The only other States with significant volumes were western South Dakota and Montana.<sup>5</sup> Idaho and Montana accounted for 28 percent of the output of all roundwood other than saw logs, veneer logs, and pulpwood.

**Number of active sawmills declines,  
plywood plants increase**

There were 657 active sawmills in the Rocky Mountain States in 1966, as compared to 864 in 1962 — a decrease of 24 percent.

<sup>5</sup> Western South Dakota output and part of the Idaho and Montana output were shipped to mills in the Lake States.



Table 2. — Output of roundwood products, by State, for selected years, 1952-1966

| State                | Year           |                  |                  |       |                  |
|----------------------|----------------|------------------|------------------|-------|------------------|
|                      | 1952           | 1954             | 1958             | 1962  | 1966             |
|                      | <i>Percent</i> |                  |                  |       |                  |
| Idaho                | 43.5           | 43.3             | 41.1             | 38.4  | 39.1             |
| Montana              | 25.9           | 23.9             | 26.3             | 31.9  | 29.4             |
| Western South Dakota | 1.7            | <sup>1</sup> 1.5 | <sup>1</sup> 3.3 | 1.7   | 2.0              |
| Wyoming              | 2.8            | 2.9              | 3.2              | 3.2   | 4.1              |
| Arizona              | 10.8           | 10.0             | 8.9              | 10.1  | 11.1             |
| Colorado             | 7.3            | 6.1              | 6.7              | 5.6   | 6.3              |
| Nevada               | .1             | .8               | .9               | .1    | ( <sup>2</sup> ) |
| New Mexico           | 6.4            | 9.5              | 7.7              | 7.1   | 6.3              |
| Utah                 | 1.5            | 2.0              | 1.9              | 1.9   | 1.7              |
| Total                | 100.0          | 100.0            | 100.0            | 100.0 | 100.0            |

<sup>1</sup> Computed from data for entire State; separate data for western South Dakota not available for 1954 and 1958.

<sup>2</sup> Less than 0.05 percent.

The following tabulation shows the 1966 distribution of mills by State.

| State                | Number of<br>active mills |
|----------------------|---------------------------|
| Idaho                | 168                       |
| Montana              | 148                       |
| Western South Dakota | 21                        |
| Wyoming              | 65                        |
| Arizona              | 23                        |
| Colorado             | 116                       |
| Nevada               | 2                         |
| New Mexico           | 64                        |
| Utah                 | 50                        |
| Total                | 657                       |

Average lumber production per mill in 1966 was 6.4 MMBF as compared with 4.2 million in 1962. One important factor contributing to the higher average production per mill in 1966 was the substantial decrease in the number of smaller mills as shown in table 3.

In 1966, log imports to sawmills and veneer and plywood plants in the Mountain States were reported as 74 MMBF and came mainly from California and Washington. Considerable movement of logs across State boundaries occurred within the Mountain States, especially between Idaho and Montana.

In 1966 about 92,000 cords, or practically one-third of the round pulpwood harvested

Table 3. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|------|--------------------|---|----------------------------|
|                              |      | <i>Number</i>      | <i>MMBF</i>                               | <i>Percent</i>             |
| 10 million and more          | 1962 | 112                | 25.1                                      | 77.7                       |
|                              | 1966 | 114                | 30.2                                      | 81.5                       |
| 1 to 10 million              | 1962 | 232                | 2.9                                       | 18.9                       |
|                              | 1966 | 167                | 3.9                                       | 15.4                       |
| Less than 1 million          | 1962 | 520                | .2  | 3.4                        |
|                              | 1966 | 376                | .3  | 3.1                        |

<sup>1</sup> 1962 and 1966 averages obtained by prorating the Bureau of the Census lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

from timberlands in the Rocky Mountain States went to the Lake States. Also marketed in the Lake States were nearly 90,000 cords of chips. The latter volume constituted 6 percent of the volume of chips and sawdust produced as a pulpwood byproduct of sawmills in the Mountain States. The leading States in exports of round pulpwood to the Lake States were western South Dakota (54,000 cords) and Montana (37,000 cords). Of the round pulpwood exported to the Lake States, ponderosa pine comprised about one-half of the volume and lodgepole pine two-fifths.

Veneer and plywood plants increased from eight in 1962 to 12 in 1966. Distribution of plants for the 2 years was as follows:

| <i>State</i>    | <i>1962</i> | <i>1966</i> |
|-----------------|-------------|-------------|
| <b>Idaho</b>    | <b>3</b>    | <b>5</b>    |
| <b>Montana</b>  | <b>5</b>    | <b>6</b>    |
| <b>Colorado</b> | <b>0</b>    | <b>1</b>    |

There were four active pulpmills in the Mountain States in 1966, one in Idaho, one in Montana, and two in Arizona. Only three mills were active in 1962.

#### **Utilization of roundwood improved — byproducts increased, residues decreased**

Volume of plant byproducts in 1966 amounted to 201 MMCF or about one-fourth the volume of roundwood. Distribution of this volume by type of byproduct was as follows:

| <i>Byproduct</i>         | <i>MMCF</i> | <i>Percent</i> |
|--------------------------|-------------|----------------|
| <b>Fiber<sup>1</sup></b> | <b>116</b>  | <b>58</b>      |
| <b>Industrial fuel</b>   | <b>67</b>   | <b>33</b>      |
| <b>Domestic fuel</b>     | <b>2</b>    | <b>1</b>       |
| <b>Others</b>            | <b>16</b>   | <b>8</b>       |
| <b>Total</b>             | <b>201</b>  | <b>100</b>     |

<sup>1</sup>Mainly chips and sawdust for pulpwood.

Nearly 90 percent of the total volume of plant byproducts came from sawmills; veneer and plywood plants were the principal source of the remainder.

Byproduct volume in 1966 was nearly three times the 1962 output of 68.7 MMCF. The latter represented only 11 percent of the roundwood volume for that year. Idaho and Montana made the greatest gains in volume between 1962 and 1966, although percentage-wise Nevada and Arizona were outstanding. The biggest increases in volume occurred in States with pulpmills and papermills — Idaho, Montana, and Arizona.

Volume of plant residues is affected not only by the total volume of roundwood received at mills, but also by the proportion of roundwood volume utilized for byproducts. Therefore, it is not surprising that in light of the big increase in byproduct volume in 1966 as compared with 1962, plant residues decreased 38 MMCF or 19 percent. This overall decrease occurred despite the fact that reductions occurred in only four States:

| <i>State</i>                | <i>Reduction in residue volume 1962 to 1966</i> |                  |
|-----------------------------|---|------------------|
|                             | <i>(MCF)</i>                                    | <i>(Percent)</i> |
| <b>Montana</b>              | <b>24,614</b>                                   | <b>39</b>        |
| <b>Idaho</b>                | <b>23,947</b>                                   | <b>30</b>        |
| <b>Western South Dakota</b> | <b>523</b>                                      | <b>19</b>        |
| <b>New Mexico</b>           | <b>1,930</b>                                    | <b>11</b>        |

Increases occurred in all other States and amounted to 13 MMCF. The biggest increases were in Nevada (627 percent) and Wyoming (39 percent).

The 1966 volume of plant residues amounted to 20 percent of roundwood volume — a decrease from the 31 percent in 1962.

The lumber industry was by far the major producer of residues; only about 3 percent of the total volume came from other industries.

Nearly three-fifths of the residues volume was fine material (sawdust and shavings). The remainder was slabs, edgings, and similar coarse material.

#### **Roundwood products were mainly from growing stock inventory**

In 1966, 759 MMCF or 94 percent of the total volume of roundwood products came



Table 4. — Removals from growing stock, by State, 1966

| State                         | Total<br>removals | All<br>products | Logging<br>residues | Other<br>removals |
|-------------------------------|-------------------|-----------------|---------------------|-------------------|
| -----Thousand cubic feet----- |                   |                 |                     |                   |
| Idaho                         | 338,508           | 301,930         | 36,034              | 544               |
| Montana                       | 270,555           | 233,369         | 36,860              | 326               |
| Western South Dakota          | 15,775            | 14,923          | 767                 | 85                |
| Wyoming                       | 35,980            | 32,596          | 2,715               | 669               |
| Arizona                       | 81,198            | 71,032          | 7,509               | 2,657             |
| Colorado                      | 56,404            | 49,432          | 4,346               | 2,626             |
| Nevada                        | 76                | 76              | ( <sup>1</sup> )    | ( <sup>1</sup> )  |
| New Mexico                    | 49,320            | 42,849          | 5,122               | 1,349             |
| Utah                          | 15,484            | 13,146          | 1,486               | 852               |
| Total                         | 863,300           | 759,353         | 94,839              | 9,108             |

<sup>1</sup> Less than 0.5 MCF.

from the growing stock inventory on commercial forest land. The remaining 6 percent came from cull and dead trees on commercial forest land and from harvesting trees on other lands.

The net volume of growing stock trees removed from inventory in 1966 was 863 MMCF of which 88 percent went into roundwood products. Logging residues (the unused portions of trees cut or killed by logging) accounted for 95 MMCF (11 percent). An operation that had a large amount of logging residue is shown in figure 5. Other removals (the net volume of growing stock trees removed from inventory by cultural operations such as timber-stand improvements, land clearing, and

changes in land use) accounted for the remaining 9 MMCF or 1 percent of total removals. Removals from growing stock by type of removals and by State for 1966 are shown in table 4.

Total sawtimber removals from commercial forest land were 5 billion board feet, of which 93 percent went into roundwood products. Logging residues accounted for 6 percent and other removals, 1 percent.

Tables 25 through 34, in Appendix B, present additional statistics concerning timber products of the Rocky Mountain States.



*Figure 5.—An operation in north Idaho illustrating a large amount of logging residue. Such residues accounted for 11 percent of the 863 MMCF of growing stock removals in the Rocky Mountain States in 1966. Nearly all the remaining volume of timber removals went into roundwood products, with ponderosa pine and Douglas-fir the two leading species harvested.*



# IDAHO

Idaho led all other Mountain States with 316 MMCF of roundwood product output in 1966 or 39 percent of the total for the Mountain States. The 1966 output for Idaho represents a 27 percent increase since 1962, and 61 percent since 1952, but about a 4 percent decrease from 1956 (figure 6).

**Saw logs accounted for four-fifths of roundwood output; veneer log and pulpwood output was up sharply**

The volume of saw-log output in 1966 was 260 MMCF (1,665 MMBF), which represents a 10 percent increase since 1962. The saw-log output was 82 percent of the total roundwood volume in 1966 — about 12 percent less than in 1962. Veneer-log production of 39 MMCF represented about 12 percent of the

total roundwood product output and was about 14 times the amount in 1962. Pulpwood output was 9 MMCF, nearly double the 1962 volume, and accounted for 3 percent of all roundwood products in 1966. With several new chipmills using round pulpwood already operating or under construction, pulpwood production will undoubtedly continue upward. The 1966 output of all other products combined was 8 MMCF, up about 26 percent from 1962; this volume accounted for nearly 3 percent of all roundwood products.

Saw-log production continued to parallel total roundwood output with respect to percent of increases since 1952. The total output of all other products made a sharp relative increase between 1962 and 1966. Compari-

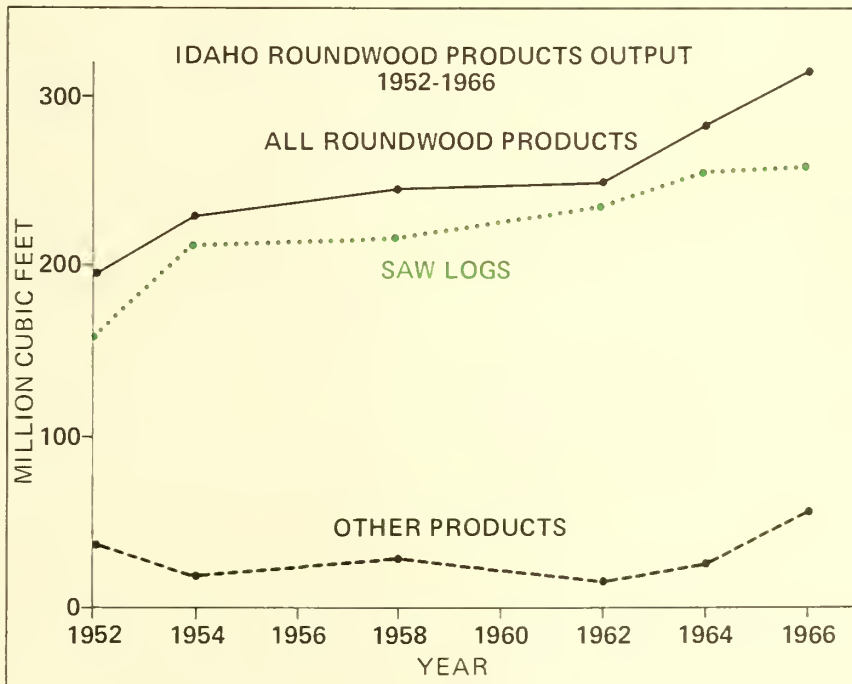


Figure 6

Table 5. — Roundwood products output, 1962 and 1966, and percent change

| Product                                    | Unit of measure         | 1962      | 1966      | Percent change |
|--|-------------------------|-----------|-----------|----------------|
| Saw logs                                   | Thousand board feet     | 1,547,334 | 1,665,425 | 8              |
| Veneer logs                                | Thousand board feet     | 19,030    | 258,129   | 1,256          |
| Pulpwood                                   | Thousand standard cords | 66        | 107       | 62             |
| Commercial poles                           | Thousand pieces         | 150       | 192       | 28             |
| Posts                                      | Thousand pieces         | 818       | 699       | -15            |
| Mine timbers                               | Thousand cubic feet     | 223       | 142       | -36            |
| Miscellaneous industrial wood <sup>1</sup> | Thousand cubic feet     | 124       | 751       | 506            |
| Miscellaneous farm timbers                 | Thousand cubic feet     | 2,302     | 1,525     | -34            |
| Fuelwood                                   | Thousand standard cords | 5         | 15        | 200            |
| All products                               | Thousand cubic feet     | 249,231   | 316,188   | 27             |

<sup>1</sup>Includes products such as house logs, shingle bolts, and similar items.

sons for saw logs and various other products are shown in table 5.

Fifty-five percent of Idaho's 1966 saw-log output came from three counties. Clearwater County contributed 30 percent (494 MMBF) of the total. Shoshone and Idaho Counties provided 13 percent (222 MMBF) and 12 percent (206 MMBF) respectively. Clearwater and Shoshone Counties' output increased substantially since 1962 while Idaho County's was down slightly. Over half of Idaho's veneer-log output of 258 MMBF came from Clearwater County; Idaho County accounted for 24 percent (63 MMBF). The pulpwood volume of 106,652 standard cords came primarily from Clearwater County (42 percent) and Bonner County (34 percent).

One hundred and fifteen MMBF of saw logs were exported from Idaho in 1966, with 95 percent of the volume going to Montana. The remainder went to Washington and Wyoming.

**Sixty percent of all product volume came from Douglas-fir, true firs, and western white pine**

Douglas-fir, true firs, and western white pine led all species in total roundwood production as well as in both saw-log and veneer-

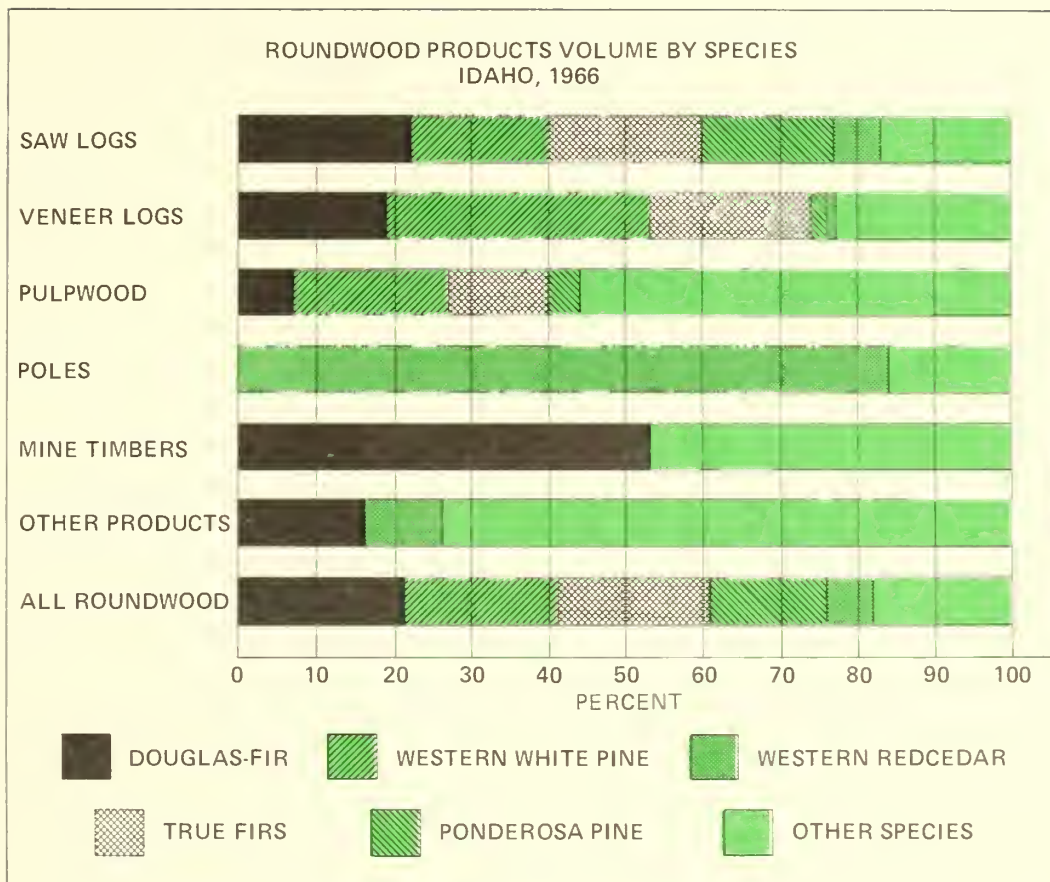
log output. Ponderosa pine and western red-cedar were other species used for a number of products (figure 7). Lodgepole pine was used mainly for saw logs, pulpwood, posts, fuelwood, and miscellaneous farm timbers. Western hemlock was a significant pulpwood species.

The output of all major species went up from 1962, especially lodgepole pine (182 percent), western white pine (67 percent), and western larch (44 percent). Douglas-fir was up 16 percent, true firs 15 percent, and ponderosa pine 5 percent.

**National Forests supplied more than one-half of roundwood**

National Forests were the source of 171 MMCF or 54 percent of the roundwood products in 1966. Forest industry lands provided a harvest of 72 MMCF, or 23 percent. The remainder of the output came from the other public and other private classes in about equal proportions.

Output of all four classes of ownership was higher in 1966 than in 1962. The largest increase was in the National Forest contribution, which rose 42 percent. This compares with a 13 percent increase for forest industry lands, 14 percent for other private lands, and 11 percent for other public lands.



*Figure 7*

### Fewer sawmills produce more lumber

In 1966, there were 168 active sawmills in Idaho as compared to 193 in 1962, continuing the trend towards fewer mills. Average lumber production per mill was up 20 percent to 9.5 MMBF, which is almost half again as high as the average production for all Mountain States mills (6.4 MMBF). Table 6 presents production and number of sawmills for selected years.

As shown in table 6, there was a small increase in the number of large and small mills and a decrease of 35 mills in the medium size class between 1962 and 1966.

Imports of logs to sawmills and plywood plants in Idaho in 1966 were reported as 40 MMBF from Montana, 29 million from Washington, and 123,000 from Wyoming. About 94 percent of this volume was in saw logs, the remainder, veneer logs.

### Plant byproducts are of increasing significance; residue volume is less

The volume of plant byproducts totaled 92 MMCF in 1966 which represents 46 percent of the entire Mountain States output. Industrial sources of these materials and types of byproducts are shown in table 7.

Byproduct volume in 1966 was more than double the 38.9 MMCF output of 1962. Idaho thus made the greatest gain in volume of any of the Mountain States between 1962 and 1966. Other States showed greater percentage increases.

As would be expected, the significant increase in byproduct volume was accompanied by a very substantial decrease in plant residues, 24 MMCF, between 1962 and 1966. The 1966 volume of plant residues amounted

Table 6. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|------|--------------------|---|----------------------------|
|                              |      | <i>Number</i>      | <i>MMBF</i>                               | <i>Percent</i>             |
| 10 million and more          | 1956 | 37                 | 31.5                                      | 73                         |
|                              | 1962 | 42                 | 28.2                                      | 78                         |
|                              | 1966 | 45                 | 31.3                                      | 88                         |
| 1 to 10 million              | 1956 | 108                | 3.8                                       | 25                         |
|                              | 1962 | 81                 | 3.8                                       | 20                         |
|                              | 1966 | 46                 | 3.8                                       | 11                         |
| Less than 1 million          | 1956 | 166                | .2  | 2                          |
|                              | 1962 | 70                 | .4  | 2                          |
|                              | 1966 | 77                 | .2  | 1                          |

<sup>1</sup> 1956 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

to 18 percent of roundwood, considerably less than the 32 percent of 1962.

Nearly all the plant residues were produced by the lumber industry. About three-fifths of the volume was fine material (sawdust and shavings) and two-fifths coarse material such as slabs and edgings. Between 1962 and 1966, coarse residues showed a reduction of nearly one-half in volume and fine residues of somewhat less than one-fourth.

#### Growing stock provided nearly all roundwood products

In Idaho, 95 percent (302 MMCF) of the total volume of roundwood products harvested came from the growing stock inventory on commercial forest land. Cull and dead trees on commercial forest land and harvesting of trees

on other lands provided the remaining volume of roundwood products.

Eighty-nine percent of the total removals from growing stock went into roundwood products. Logging residues (36 MMCF) accounted for nearly all of the remaining volume. Timber-stand improvement operations, land clearing, and changes in land use contributed a very small volume.

Total sawtimber removals from commercial forest land were 1,974 MMBF with 94 percent (1,859 MMBF) going into products. Logging residues accounted for 112 MMBF, nearly all of the remaining volume.

Tables 35 through 39, in Appendix B, present additional statistics concerning timber products of Idaho.

Table 7. — Volume of plant byproducts by industrial source and use class, 1966

| Industrial source           | All byproducts | Fiber <sup>1</sup> | Industrial fuel | Domestic fuel    | Other byproducts <sup>2</sup> |
|-----------------------------|----------------|--------------------|-----------------|------------------|-------------------------------|
| <i>Million cubic feet</i>   |                |                    |                 |                  |                               |
| Lumber industry             | 79.0           | 42.3               | 28.4            | 0.5              | 7.8                           |
| Veneer and plywood industry | 13.2           | 11.0               | .1              | ( <sup>3</sup> ) | 2.1                           |

<sup>1</sup> Mainly chips and sawdust for pulpwood.

<sup>2</sup> Includes livestock bedding, mulch, and small dimension and specialty items.

<sup>3</sup> Less than 0.05 MMCF.



# MONTANA

Output of roundwood products from Montana timberlands in 1966 amounted to 238 MMCF or 30 percent of the total from lands within the Mountain States. Production showed an increase of 15 percent over 1962 and was slightly more than double the volume for 1952. In comparison, production for the Mountain States increased 25 percent over the 1962-66 period and 79 percent between 1952 and 1966.

## **Saw logs accounted for more than four-fifths of roundwood output**

The 1966 saw-log volume of 196 MMCF (1,254 MMBF) constituted 82 percent of the

total volume of roundwood products. Veneer logs were second in volume (28 MMCF) and contributed nearly 12 percent of the roundwood output. The remaining 6 percent consisted of volume in pulpwood, poles, posts, mine timbers, fuelwood, and other roundwood for a variety of uses.

Saw-log production continued roughly to parallel total roundwood output with respect to percent of increases since 1952 (figure 8). However, the total output of all other products made a sharp relative increase between 1962 and 1966. Comparisons for these other roundwood products, as well as for saw logs, are shown in table 8.

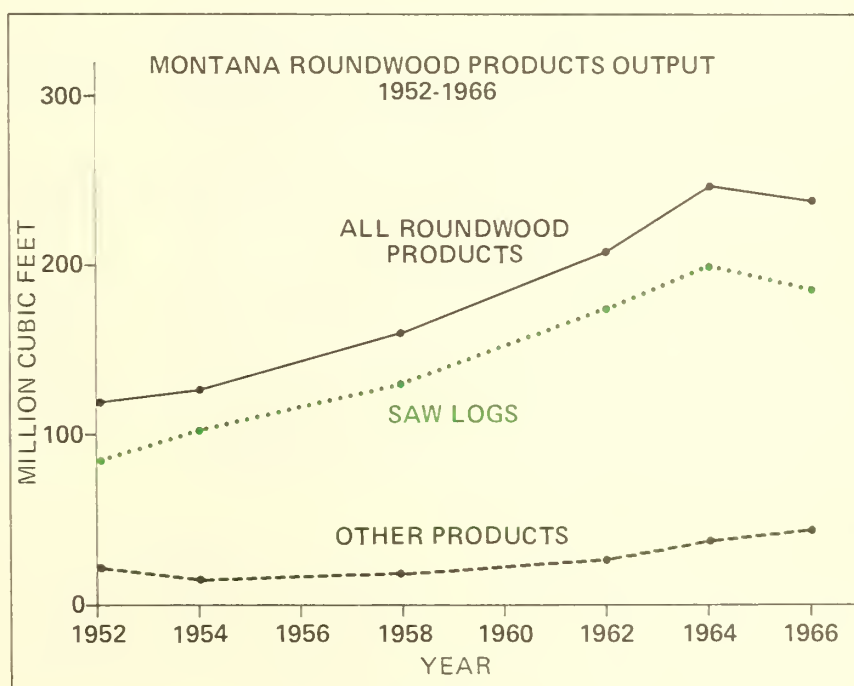


Figure 8

Table 8. — Roundwood products output, 1962 and 1966, and percent change

| Product                                    | Unit of measure         | 1962      | 1966      | Percent change |
|--|-------------------------|-----------|-----------|----------------|
| Saw logs                                   | Thousand board feet     | 1,275,688 | 1,253,868 | —2             |
| Veneer logs                                | Thousand board feet     | 110,654   | 183,449   | 66             |
| Pulpwood                                   | Thousand standard cords | 47        | 44        | —6             |
| Commercial poles <sup>1</sup>              | Thousand pieces         | 122       | 133       | 9              |
| Posts                                      | Thousand pieces         | 1,047     | 1,569     | 50             |
| Mine timbers                               | Thousand cubic feet     | 271       | 2,974     | 997            |
| Miscellaneous industrial wood <sup>2</sup> | Thousand cubic feet     | 281       | 256       | —9             |
| Miscellaneous farm timbers                 | Thousand cubic feet     | 2,108     | 3,027     | 44             |
| Fuelwood                                   | Thousand standard cords | 4         | 8         | 100            |
| All products                               | Thousand cubic feet     | 207,289   | 238,231   | 15             |

<sup>1</sup> Includes a small amount of piling.

<sup>2</sup> Includes products such as house logs, converter poles, and similar items.

Relatively few counties provided the major portion of the timber products output. Of the 1,254 MMBF of saw logs removed from Montana timberlands, nearly 25 percent came from Lincoln County; Flathead with 13 percent and Sanders and Missoula with 12 percent each were the other leading counties. Veneer-log output from timberlands within the State (183 MMBF) came largely from three counties — Flathead 34 percent, Missoula 30 percent, and Lincoln 19 percent. The pulpwood volume of 43,645 cords came from two counties: Gallatin County produced 85 percent and Lincoln County 15 percent (figure 9).

Although products harvested from Montana timberlands were largely used by industries within the State, there were some significant exports. The round pulpwood was exported — 85 percent to the Lake States, the remainder to Washington State. Other exports consisted of about 42 MMBF of saw logs and veneer logs to Idaho and Wyoming, and a small number of commercial poles to the Lake States.

#### Douglas-fir led in product volume

Douglas-fir, with 81 MMCF harvested for roundwood products, was by far the leading species in 1966. The other important species contributing to total roundwood output were

western larch (46 million), ponderosa pine (36 million), and lodgepole pine (32 million). However, as shown by figure 10, species varied substantially in importance by individual products.

The output of most major species went up from 1962 along with the general increase in roundwood volume. The biggest increase (62 percent) was for lodgepole pine. Douglas-fir output was up 17 percent and ponderosa pine was up 23 percent. Western larch declined about 7 percent in product volume.

#### National Forests supplied nearly three-fifths of roundwood

Montana's National Forests were the source of 141 MMCF, or 59 percent of the roundwood products in 1966. Forest industry lands provided a harvest of 39 MMCF or 17 percent. Other private owners furnished 15 percent of the product volume, and lands classed as other public, 9 percent.

Output from National Forest lands in 1966 increased 22 percent over 1962, and output from other public holdings increased by 109 percent. The 1966 volume from other private lands remained about the same as 1962, while output from forest industry lands declined 11 percent.



Figure 9. — Loading pulpwood near Bozeman, Montana, for shipment to mills in the Lake States.

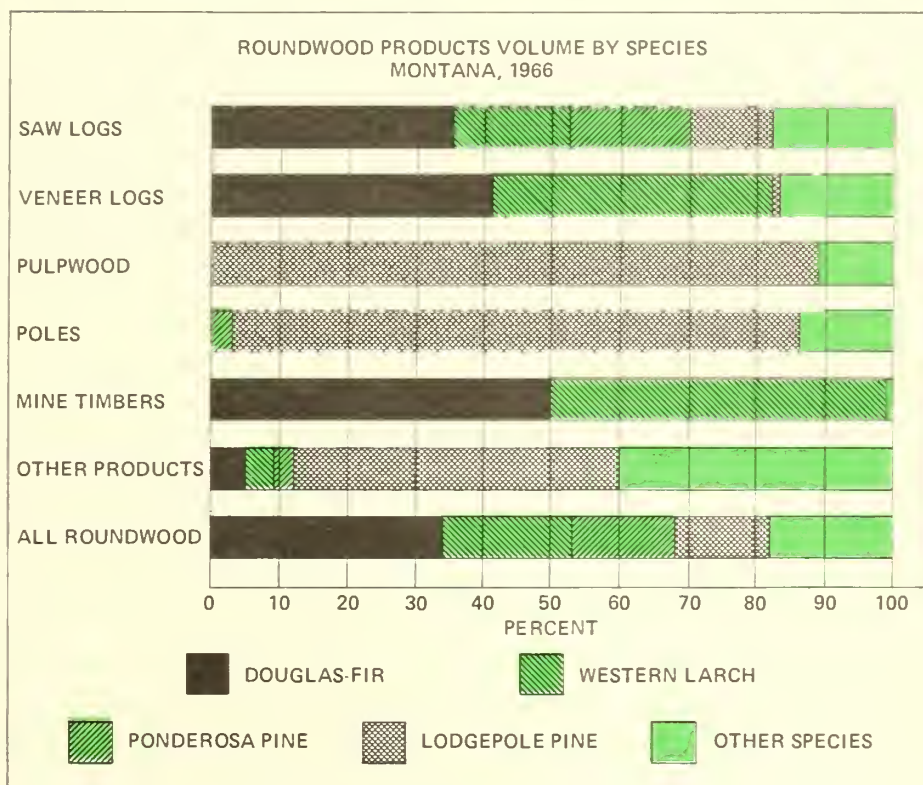


Figure 10

Table 9. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|------|--------------------|---|----------------------------|
|                              |      | <i>Number</i>      | <i>MMBF</i>                               | <i>Percent</i>             |
| 10 million and more          | 1956 | 26                 | 25.1                                      | 67                         |
|                              | 1962 | 40                 | 23.4                                      | 87                         |
|                              | 1966 | 37                 | 33.5                                      | 90                         |
| 1 to 10 million              | 1956 | 78                 | 3.4                                       | 27                         |
|                              | 1962 | 40                 | 2.7                                       | 11                         |
|                              | 1966 | 25                 | 3.3                                       | 6                          |
| Less than 1 million          | 1956 | 229                | .3  | 6                          |
|                              | 1962 | 129                | .2  | 2                          |
|                              | 1966 | 86                 | .6  | 4                          |

<sup>1</sup> 1956 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census' lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

#### Sawmills were fewer but average production increased

The trend over recent years toward fewer mills but greater average production per mill continued in 1966. Average production of the 148 mills active in 1966 was 9.3 MMBF. In comparison, average production of the 209 mills in 1962 was 5 MMBF, and of the 333 mills in 1956, 3 million. Table 9 presents this information for sawmills in selected size-class groupings.

As indicated in table 9, between 1962 and

1966 the number of mills declined in all size classes. Most of the decrease in number, especially in the small size class, resulted from mills becoming inactive or going out of business.

Log receipts at Montana mills include logs imported from other States as well as those received from Montana timberlands. Imports of logs to sawmills and plywood plants in Montana in 1966 are reported as 109 MMBF from Idaho, and 67,000 from Wyoming; about 97 percent of this volume was in saw logs, the remainder veneer logs.

Table 10. — Volume of plant byproducts by industrial source and use class, 1966

| Industrial source            | All byproducts | Fiber <sup>1</sup> | Industrial fuel | Domestic fuel | Other byproducts <sup>2</sup> |
|------------------------------|----------------|--------------------|-----------------|---------------|-------------------------------|
| -----Million cubic feet----- |                |                    |                 |               |                               |
| Lumber industry              | 64.7           | 34.0               | 26.4            | 0.7           | 3.6                           |
| Veneer and plywood industry  | 8.8            | 8.2                | .2              | .3            | .1                            |
| Total                        | 73.5           | 42.2               | 26.6            | 1.0           | 3.7                           |

<sup>1</sup> Mainly chips and sawdust for pulpwood.

<sup>2</sup> Includes livestock bedding, mulch, and small dimension and specialty items.



### **Plant byproducts were up sharply since 1962; residues down**

The 1966 volume of plant byproducts amounted to 73.5 MMCF. The industrial sources of these materials and types of byproducts are shown in table 10.

The 1966 volume of plant byproducts represents three times the volume produced in 1962. This increased utilization partially explains the reduction in unused plant residues from 63 MMCF in 1962 to 38 million in 1966. The greatest decrease in residue volume was in the lumber industry — from 57 MMCF in 1962 to 37 million in 1966, or 35 percent less. However, the plywood industry showed the greatest percentage decrease — 87 percent. Other industries did not change significantly in residue volume.

Of the 1966 residue volume of 38 MMCF, about two-thirds was fine material (sawdust and shavings), and the remainder was coarse material (slabs, edgings, veneer cores, and trimmings). Between 1962 and 1966 coarse residues showed a reduction of about one-half in volume, and fine residues somewhat less than one-third.

### **Nearly all roundwood products came from growing stock inventory**

Of the total volume of roundwood products harvested in Montana in 1966, 98 percent, or 233 MMCF, came from the growing stock inventory on commercial forest land. Cull and dead trees on commercial forest land and harvesting of trees on other lands provided the remaining 2 percent.

Eighty-six percent of the total removals from growing stock went into roundwood products; nearly all of the remainder was in the form of logging residues (37 MMCF), although a very small volume resulted from timber-stand improvement operations, land clearing, and changes in land use.

Total sawtimber removals from commercial forest land were 1,571 MMBF with more than 92 percent (1,452 MMBF) going into products. Logging residues accounted for 117 MMBF, nearly all of the remaining volume.

Tables 40 through 44, in Appendix B, present additional statistics concerning timber products of Montana.

# WESTERN SOUTH DAKOTA

Output of roundwood products from western South Dakota timberlands in 1966 amounted to nearly 16 MMCF or about 2 percent of the total from lands within the Mountain States. Production increased 41 percent over 1962 and more than doubled the 1952 output (figure 11). In comparison, production for the Mountain States increased 25 percent over the 1962-66 period and 79 percent between 1952 and 1966.

## Saw logs were still predominant but pulpwood output was moving up

The 1966 saw-log volume of 6.9 MMCF (44 MMBF) constituted 44 percent of the total volume of roundwood products. Pulp-

wood was second in volume (4.7 MMCF) and contributed 29 percent of the roundwood output. The remaining 27 percent consisted of posts, fuelwood, poles, mine timbers, and miscellaneous farm timbers.

As indicated by figure 11, saw-log output as a percentage of total product volume has followed a generally declining trend since 1952. Between 1954 and 1958 the combined volume of other products began increasing more rapidly than saw-log volume. Pulpwood became a significant product between 1958 and 1962 and subsequently made further gains. Total output of all products in 1966 was up 5 MMCF, or 41 percent over 1962; comparisons for major products are shown in table 11.

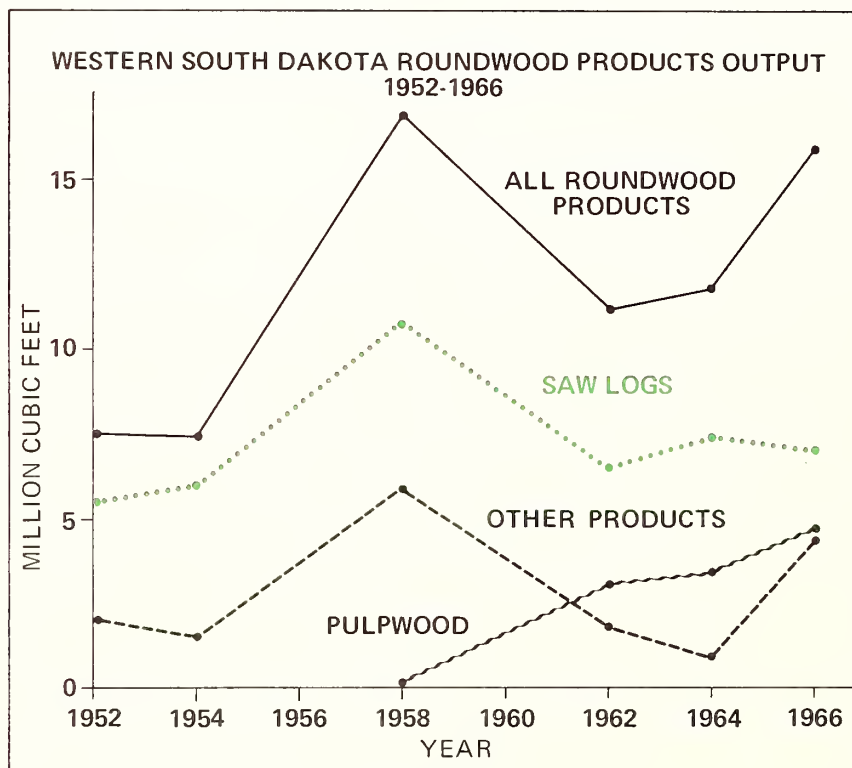


Figure 11



Table 11. — Roundwood products output, 1962 and 1966, and percent change

| Product  | Unit of measure         | 1962   | 1966   | Percent change |
|--|-------------------------|--------|--------|----------------|
| Saw logs   | Thousand board feet     | 38,958 | 44,308 | 14             |
| Pulpwood   | Thousand standard cords | 34     | 54     | 59             |
| Mine timbers   | Thousand cubic feet     | 0      | 1      | 100            |
| Posts, fuelwood,<br>miscellaneous<br>farm timbers <sup>1</sup> | Thousand cubic feet     | 1,682  | 4,301  | 156            |
| All products   | Thousand cubic feet     | 11,235 | 15,859 | 41             |

<sup>1</sup>Includes volume of commercial poles.

Distribution of the saw-log output among the four counties or portions of counties from which harvested was as follows:

| County     | Percent |
|------------|---------|
| Custer     | 33.9    |
| Lawrence   | 20.8    |
| Meade      | 11.9    |
| Pennington | 33.4    |
|            | 100.0   |

About 97 percent of the product volume was ponderosa pine. The remainder was white spruce and practically all of this went into pulpwood.

Not all products harvested from western South Dakota timberlands were processed by industries within the State. About 10 MMBF, or 23 percent of the saw-log output, went to mills in Wyoming. And the entire pulpwood output, both roundwood and chips, went to mills in the Lake States.

#### Public lands provided nine-tenths of roundwood volume

In 1966 as in 1962 public lands — particularly National Forests — provided the preponderance of the 15.9 MMCF of product volume:

| Land ownership class | 1962      | 1966  |
|----------------------|-----------|-------|
|                      | (Percent) |       |
| National Forest      | 83.9      | 83.4  |
| Other public         | .5        | 6.6   |
| Forest industry      | 3.2       | 6.6   |
| Other private        | 12.4      | 3.4   |
|                      | 100.0     | 100.0 |

Most of the 1966 harvest for the "other public" class came from State lands although Bureau of Land Management lands provided some volume.

The National Forest percentage of total product volume changed very little between 1962 and 1966, but there has been a substantial increase over the last 30 years. Data for 1935 (Ware 1936) indicate National Forest lands provided a little less than 60 percent of the harvest volume in western South Dakota.

#### Sawmill numbers decreased since 1962 but average production increased

Twenty-one sawmills were active in western South Dakota in 1966 and had an average cut of 2.7 MMBF per mill. In comparison, 28 mills were active in 1962 and had an average cut per mill of 1.7 MMBF. As a further comparison, average production of all mills in the Mountain States in 1966 was 6.4 MMBF.

Table 12. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|------|--------------------|---|----------------------------|
|                              |      | <i>Number</i>      | <i>MMBF</i>                               | <i>Percent</i>             |
| 10 million and more          | 1962 | ( <sup>2</sup> )   | ( <sup>2</sup> )                          | ( <sup>2</sup> )           |
|                              | 1966 | 2                  | 18.8                                      | 67                         |
| 1 to 10 million              | 1962 | 7                  | 6.0                                       | 87                         |
|                              | 1966 | 5                  | 2.7                                       | 24                         |
| Less than 1 million          | 1962 | 21                 | .3  | 13                         |
|                              | 1966 | 14                 | .4  | 9                          |

<sup>1</sup>Averages derived by prorating the Bureau of Census' lumber production figures among mill classes on the basis of the Intermountain Station's survey of saw-log receipts.

<sup>2</sup>To avoid the possibility of disclosing individual operations in 1962, data for the few mills in this class were included in the 1 to 10 million class.

Table 12 provides a comparison between 1962 and 1966 of South Dakota mills by size-class groups.

It is apparent from the above that the total reduction of 7 mills by 1966 occurred in the small size class. This reduction, together with substantially increased production of mills in the large and medium classes accounted for the increased average output per mill.

Sawmill log receipts include logs imported from outside the State as well as those received from western South Dakota timberlands. In 1966, imports of saw logs were reported as 10 MMBF from Wyoming. These imports just about balance the volume of saw-log exports mentioned earlier.

#### Volume of plant byproducts increased sharply since 1962; residues decreased slightly

The 1966 volume of plant byproducts amounted to 1.5 MMCF — practically all of it from the lumber industry. Distribution of this volume by type of byproduct was as follows:

| <i>Byproduct</i>   | <i>MCF</i>   |
|--------------------|--------------|
| Pulp chips         | 811          |
| Industrial fuel    | 558          |
| Domestic fuel      | 48           |
| Other <sup>1</sup> | 116          |
| <b>Total</b>       | <b>1,533</b> |

<sup>1</sup>Includes such byproducts as livestock bedding, mulch, and small dimension and specialty items.

The 1966 volume of plant byproducts represents more than two and one-half times the volume produced in 1962.

The volume of unused plant residues in 1966 amounted to 2.2 MMCF — down slightly from the 2.7 million in 1962. Two-thirds of the 1966 residues were fine material (sawdust and shavings); the remainder were slabs, edgings, trimmings, and similar coarse material.

#### Nearly all roundwood volume came from growing stock inventory

Of the total volume of roundwood products harvested in western South Dakota in 1966, 94 percent, or 14.9 MMCF, came from the growing stock inventory on commercial forest land. Cull and dead trees on commercial forest land and timber harvested on other lands provided the remaining 6 percent. Ninety-five percent of the total removals from growing stock went into roundwood products; the bulk of the remainder was in the form of logging residues, although there was some volume resulting from timber-stand improvement operations, land clearing, and changes in land use.

Total sawtimber removals from commercial forest land were 95 MMBF with 97 percent going into products. Logging residues accounted for nearly all of the remaining volume.

Tables 45 through 47, in Appendix B, present additional statistics concerning timber products of western South Dakota.

# WYOMING

Output of roundwood products from Wyoming timberlands in 1966 amounted to 33.5 MMCF or 4 percent of the total output from lands within the Mountain States. Production showed an increase of 61 percent over 1962 and was more than two and one-half times the volume in 1952 (figure 12). In comparison, production for the Mountain States increased 25 percent over the 1962-66 period and 79 percent between 1952 and 1966.

## Saw logs were about four-fifths of roundwood output

The 1966 saw-log volume of 27.1 MMCF (173.5 MMBF) constituted 81 percent of the

total volume of roundwood products. Commercial poles were second in volume (3.6 MMCF) and constituted 11 percent of the roundwood output. The remaining 8 percent consisted of farm and mine timbers, posts, pulpwood, fuelwood, and miscellaneous industrial wood.

Sawmilling continues as the dominant timber industry. Since 1952, saw logs consistently have accounted for more than four-fifths of the annual output and in 1962 reached a high of 94 percent. However, as shown in table 13, several of the other products made sharp increases within the last 4 years.

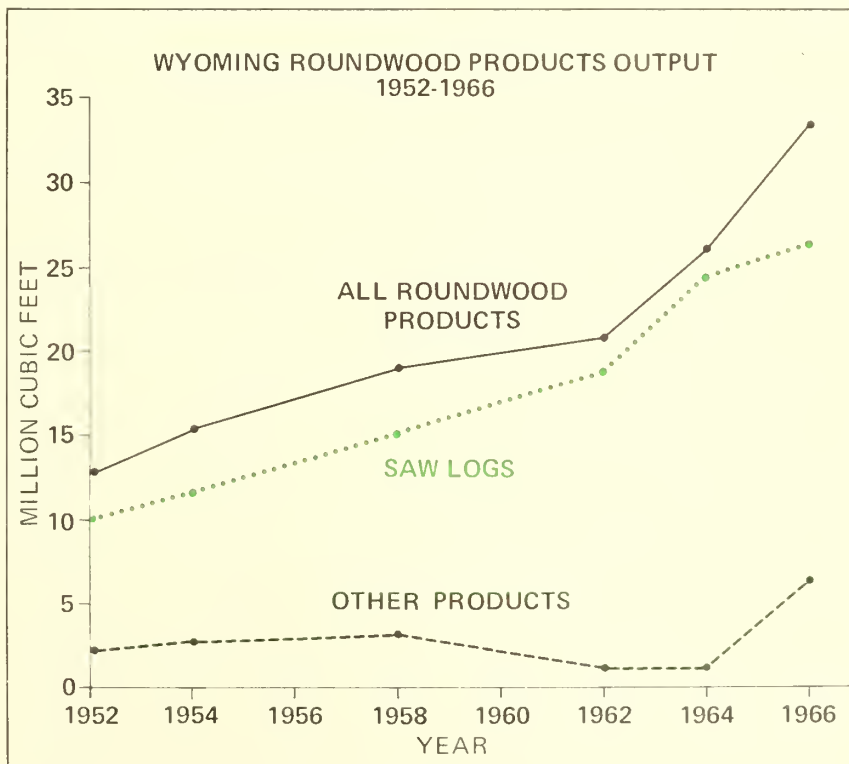


Figure 12

Table 13. — Roundwood products output, 1962 and 1966, and percent change

| Product                                    | Unit of measure         | 1962    | 1966    | Percent change |
|--|-------------------------|---------|---------|----------------|
| Saw logs                                   | Thousand board feet     | 116,523 | 173,491 | 49             |
| Pulpwood                                   | Thousand standard cords | 4       | 2       | -50            |
| Posts                                      | Thousand pieces         | 79      | 292     | 270            |
| Mine timbers                               | Thousand cubic feet     | 54      | 478     | 785            |
| Miscellaneous industrial wood <sup>1</sup> | Thousand cubic feet     | 448     | 5,412   | 1,108          |
| Fuelwood                                   | Thousand standard cords | 1       | 2       | 100            |
| All products                               | Thousand cubic feet     | 20,771  | 33,523  | 61             |

<sup>1</sup>Includes products such as house logs, commercial poles, piling, miscellaneous farm timbers, and similar items.

The leading counties and the percentage they contributed to sawmill log receipts from Wyoming timberlands were as follows:

| County             | Percent |
|--------------------|---------|
| Carbon             | 17.2    |
| Fremont            | 15.7    |
| Lincoln            | 13.7    |
| Crook              | 13.5    |
| Teton              | 12.9    |
| All other counties | 27.0    |
|                    | 100.0   |

Approximately 85 percent of the roundwood products harvested from Wyoming timberlands were processed by industries within the State. About 18 MMBF of saw logs were exported — mainly to western South Dakota and Colorado, although some exports went to Idaho and Montana. The small volume of round pulpwood went to mills in the Lake States, as did the entire volume of pulp chips (2.9 MMCF).

#### Output was predominantly lodgepole pine and came from National Forest lands

Lodgepole pine with a harvest volume of 20 MMCF, or 59 percent of the State total, continued its traditional leadership among species. The other principal species contributing to total roundwood output were ponderosa pine (21 percent), spruce (15 percent), and

Douglas-fir (3 percent). However, as shown in figure 13, species varied considerably in importance for individual products.

Consumption of all major species went up from 1962 along with the general increase in roundwood volume. The largest increase (87 percent) was for ponderosa pine. Spruce was up 63 percent and lodgepole pine 58 percent.

National Forests provided 93 percent of the roundwood harvest. This is slightly higher than the 1962 percentage; the percent from other ownership classes dropped correspondingly.

#### Sawmill numbers declined but average production increased

The trend over recent years toward fewer mills but greater average production per mill continued in 1966. Average production of the 65 mills active in 1966 was 1.9 MMBF. In comparison, average production of the 76 mills in 1962 was 1.4 million feet, and of the 107 mills in 1957, 1.0 million. As a further comparison, average production of all mills in the Mountain States in 1966 was 6.4 MMBF. Table 14 permits comparisons for 1957, 1962, and 1966 of Wyoming mills by selected size-class groupings.

Log receipts at Wyoming mills include logs imported from other States as well as those received from Wyoming timberlands. In 1966,



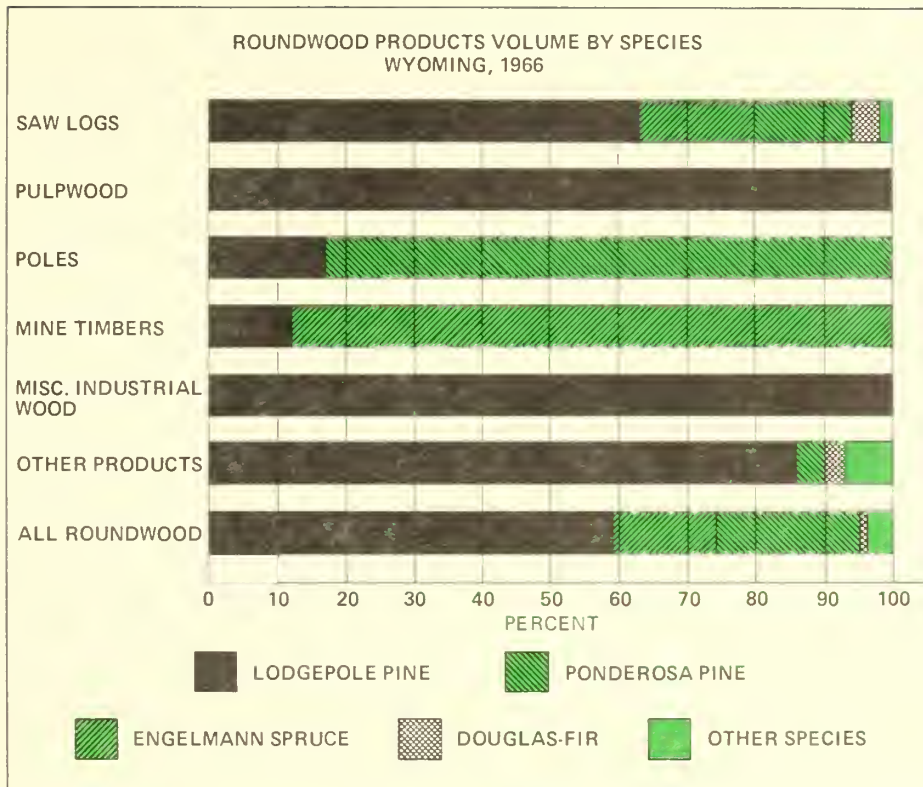


Figure 13

Table 14. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|------|--------------------|---|----------------------------|
|                              |      | Number             | MMBF                                      | Percent                    |
| 10 million and more          | 1957 | ( <sup>2</sup> )   | ( <sup>2</sup> )                          | ( <sup>2</sup> )           |
|                              | 1962 |                    |   |                            |
|                              | 1966 | 4                  | 14.7                                      | 47                         |
| 1 to 10 million              | 1957 | 22                 | 4.0                                       | 80                         |
|                              | 1962 | 19                 | 4.7                                       | 88                         |
|                              | 1966 | 19                 | 3.2                                       | 48                         |
| Less than 1 million          | 1957 | 85                 | .3  | 20                         |
|                              | 1962 | 57                 | .2  | 12                         |
|                              | 1966 | 42                 | .1  | 5                          |

<sup>1</sup> 1957 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census' lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

<sup>2</sup> To avoid the possibility of disclosing individual operations in 1957 and 1962, data for the few mills in this class were included in the 1 to 10 million class.



imports of logs to sawmills in the State amounted to 16.2 MMBF. Of this volume, 10.2 million came from western South Dakota, the remainder from Idaho, Utah, and Montana. The volume of saw-log imports was somewhat less than the 18 MMBF indicated earlier as exported.

#### **Both plant byproduct and residue volumes increased since 1962**

The 1966 volume of plant byproducts amounted to 3.3 MMCF — practically all of it from the lumber industry. Distribution of this volume by type of byproduct was as follows:

| <i>Byproducts</i>        | <i>MCF</i>   |
|--------------------------|--------------|
| <b>Pulp chips</b>        | <b>2,928</b> |
| <b>Industrial fuel</b>   | <b>165</b>   |
| <b>Domestic fuel</b>     | <b>137</b>   |
| <b>Other<sup>1</sup></b> | <b>83</b>    |
| <b>Total</b>             | <b>3,313</b> |

<sup>1</sup>*Includes such byproducts as livestock bedding, mulch, and small dimension and specialty items.*

The 1966 volume of plant byproducts represents a little more than three times the volume produced in 1962. Despite this increased production of byproducts, the volume of residues increased from 8.6 MMCF in 1962 to 11.9 million in 1966 — about a 39 percent increase. This contrasts with a 19 percent reduc-

tion for the Mountain States area. Ninety percent of the residues came from the lumber industry and about one-half the volume was fine material (sawdust and shavings), and one-half slabs, edgings, trimmings, and similar coarse material.

#### **Product volume was largely from growing stock inventory**

Of the total volume of roundwood products harvested in Wyoming in 1966, 97 percent, or 32.6 MMCF, came from the growing stock inventory on commercial forest land. Cull and dead trees on commercial forest land and timber harvested from other lands accounted for the remaining 3 percent.

Ninety-one percent of the total removals from growing stock went into roundwood products. Nearly all of the remainder was in the form of logging residues (2.7 MMCF), although a small volume resulted from timberstand improvement operations, land clearing, and changes in land use.

Total sawtimber removals from commercial forest land were 207 MMBF with 95 percent (196 MMBF) going into products. Logging residues accounted for 7 MMBF and other removals 4 million.

Tables 48 through 50, in Appendix B, present additional statistics concerning timber products of Wyoming.

## ARIZONA

Timber products volume in 1966 amounted to nearly 90 MMCF, or 11 percent of the Mountain States total output — sufficient to make Arizona the third ranking State. Production was 37 percent above that of 1962 and was nearly twice (or 1.8 times) that of 1952 (figure 14). For both comparisons (1966 with 1962 and with 1952), Arizona's increase in output was well above the average increase for the Mountain States.

**Saw logs were still the predominant product, but relative importance is declining**

Saw-log output in 1966 (62 MMCF or 400 MMBF) was 69 percent of the volume of all

roundwood products. This proportion is practically the same as it was in 1952 (68 percent). Saw-log output in Arizona, as a percentage of all roundwood products volume, apparently reached a peak in or about 1958 (86 percent) and has since been declining, although volumewise there has been an increase averaging 6.3 percent annually since 1952. However, since saw logs are still the predominant product, the output trends for saw logs and all products are, in general, similar.

Comparisons for all classes of roundwood products between 1962 and 1966 show some rather large percentage changes for products

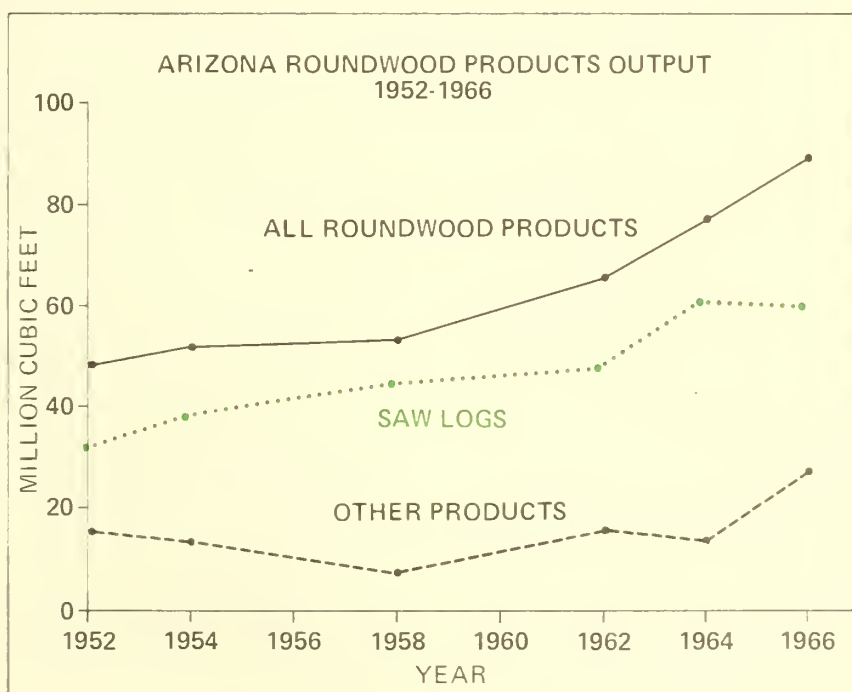


Figure 14

Table 15. — Roundwood products output, 1962 and 1966, and percent change

| Product                                     | Unit of measure         | 1962    | 1966    | Percent change |
|---|-------------------------|---------|---------|----------------|
| Saw logs                                    | Thousand board feet     | 341,757 | 400,236 | 17             |
| Pulpwood                                    | Thousand standard cords | 88      | 77      | -12            |
| Commercial poles                            | Thousand pieces         | 9       | 18      | 100            |
| Posts                                       | Thousand pieces         | 173     | 398     | 130            |
| Mine timbers                                | Thousand cubic feet     | 556     | 22      | -96            |
| Miscellaneous industrial wood <sup>1</sup>  | Thousand cubic feet     | 389     | 86      | -78            |
| Miscellaneous farm timbers                  | Thousand cubic feet     | 97      | 556     | 473            |
| Fuelwood                                    | Thousand standard cords | 97      | 226     | 133            |
| All products                                | Thousand cubic feet     | 65,529  | 89,873  | 37             |
| All products (except fuelwood)              | Thousand cubic feet     | 57,187  | 70,437  | 23             |
| All products (except saw logs and fuelwood) | Thousand cubic feet     | 7,632   | 8,000   | 5              |

<sup>1</sup>Includes products such as house logs, converter poles, excelsior bolts, and similar items.

other than saw logs and round pulpwood, as shown in table 15.

However, while the net change for all roundwood products was a gain of 37 percent, the change for industrial wood (all products except fuelwood) was 23 percent. This difference reflects the influence of the large increase in fuelwood cutting from 1962 to 1966.

Arizona had no reported log imports from other States in 1966, but about 4.6 MMBF of logs cut in Arizona were exported to New Mexico sawmills.

Nine of Arizona's 14 counties produced saw logs in 1966, but of these, three counties were predominant. Coconino County was the source of 41 percent of all saw logs and Apache County provided 35 percent. These two counties, along with Navajo County, accounted for 89 percent of all saw logs produced in the State.

### Nearly 70 percent of output came from ponderosa pine

Although ponderosa pine is still by far the dominant species, its relative importance has changed during the period from 1962 to 1966. In 1962, this species constituted 81 percent (53,278 MCF) of Arizona's output, but in 1966 it furnished 69 percent (62,372 MCF) of all roundwood products. A noteworthy change occurred in the utilization of such species as pinyon pine, juniper, and aspen (figure 15); these species comprised 18 percent of the output in 1966 as compared to 8 percent in 1962. All other species (Douglas-fir, Engelmann spruce, and the true firs) provided essentially the same percentages in 1966 as in 1962.

### Three-fourths of output came from National Forests

By providing 75 percent (67 MMCF) of Arizona's roundwood products, the National





Figure 15 — Aspen harvesting operation on the Coconino National Forest, Arizona. Eight-foot bolts are being cut here for production of excelsior. This operation illustrates use of a less significant timber species, as well as harvesting for one of the relatively minor products. In 1966 the principal aspen harvests were in Colorado (saw logs, excelsior, and match stock), New Mexico (saw logs), Utah (saw logs and excelsior), Arizona (saw logs and excelsior). The output of minor products (all roundwood except saw logs, veneer logs, and pulpwood) accounted for about 8 percent of the 1966 output of roundwood in the Rocky Mountain States.

Forests were easily the leading land ownership source in 1966. The second most important source was other public lands, a classification which includes not only lands under Federal management but also State, county, and municipal lands. These lands provided 24 percent (21 MMCF) of the 1966 output. Both the National Forests and the other public lands<sup>6</sup> increased their percentage of the total output in 1966 over their contributions in 1962, which were 69 percent and 22 percent respectively. Forest industry lands and other private lands

had reduced outputs in 1966 as compared with their outputs for 1962.

#### **Fewer sawmills produced more lumber per mill**

Arizona provided no exception to the general trend of declining sawmill numbers and increased average production per active mill. The 23 sawmills active in 1966 had an average lumber production of 19 MMBF, a considerable increase over the 12 MMBF per mill for the 28 mills active in 1962, and over the 9 MMBF per mill of the 38 mills operating in 1960. Considering the short period of time,

<sup>6</sup> Principally Apache Indian Reservation lands.

Table 16. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|------|--------------------|---|----------------------------|
|                              |      | Number             | MMBF                                      | Percent                    |
| 10 million and more          | 1960 | ( <sup>2</sup> )   | ( <sup>2</sup> )                          | ( <sup>2</sup> )           |
|                              | 1962 |                    |   |                            |
|                              | 1966 |                    |   |                            |
| 1 to 10 million              | 1960 | 10                 | 39.3                                      | 89                         |
|                              | 1962 | 27                 | 12.1                                      | 99                         |
|                              | 1966 | 20                 | 16.2                                      | 99                         |
| Less than 1 million          | 1960 | 8                  | 5.8                                       | 11                         |
|                              | 1962 | 11                 | .3  | 1                          |
|                              | 1966 | 8                  | .2  | 1                          |
|                              | 1966 | 5                  | .3  | ( <sup>3</sup> )           |

<sup>1</sup> 1960 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census' lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

<sup>2</sup> To avoid the possibility of disclosing individual operations in 1960 and 1962, data for the few mills in this class were included in the 1 to 10 million class.

<sup>3</sup> Less than 0.05 percent.

these have been exceptionally rapid changes. Arizona's 1966 output per mill was the highest of any of the Mountain States and was about three times the Mountain States average of 6.4 MMBF.

A more detailed picture of the changes in sawmill numbers, size classes, and average lumber production over the 6-year period is given in table 16. Arizona had two pulpmills operating in 1966, one producing both kraft pulp and groundwood, the other producing only groundwood.

#### Plant byproducts volume and plant residues increased since 1962

The output of plant byproducts in 1966 (19 MMCF) was nearly 18 times that of 1962 (1.1 MMCF). Although industry growth has resulted in some increase in plant residues (13.2 MMCF in 1966 as compared to 10.4 MMCF in 1962), the fact that the rise was small compared to the increase in plant byproducts is evidence of substantial gains in roundwood utilization in manufacturing plants, and in the utilization of material that formerly would have become plant residues.

#### Nearly four-fifths of roundwood products came from growing stock

Of the 90 MMCF of roundwood products output in 1966, 71 MMCF (79 percent) were from growing stock on commercial forest land. Cull and dead trees on commercial forest land, and harvesting of trees on other lands provided the remaining 21 percent.

Roundwood products comprised 88 percent of all removals from growing stock. Additional removals from growing stock were in the form of logging residues (9 percent, or 7.5 MMCF) and other removals through timberstand improvement operations, land clearing, or changes in land use, which amounted to an estimated 2.7 MMCF, or 3 percent of all removals from growing stock.

Total sawtimber removals from commercial forest land were 484 MMBF with more than 91 percent (443 MMBF) going into products. Logging residues accounted for 24 MMBF, and other removals for 17 million.

Tables 51 through 53, in Appendix B, present additional statistics concerning timber products of Arizona.



# COLORADO

Colorado's output of nearly 51 MMCF of roundwood products in 1966 ranked it fifth in the Mountain States and the volume amounted to 6 percent of the Mountain States total output. Production was 40 percent above that of 1962 and was more than one and one-half times that of 1952 (figure 16). Colorado's percentage increase in output since 1962 was the third largest in the Mountain States.

## **Saw logs accounted for more than three-fourths of roundwood output**

The volume of saw-log output in 1966 was 39 MMCF (252 MMBF) and represented 77 percent of the total volume of roundwood products. Saw-log output increased 25 per-

cent as compared to 1962. Veneer logs<sup>7</sup> were second in volume with 5 MMCF (33 MMBF) and contributed 10 percent of the roundwood output. Round mine timbers accounted for 2.6 MMCF and contributed 5 percent of the output, the remaining 8 percent consisting of volume in poles, posts, fuelwood, pulpwood, and other roundwood for a variety of uses.

Saw-log production continued to parallel total roundwood output with respect to percent of increase since 1952. The total output of other products made a sharp relative increase between 1962 and 1966. Comparisons

<sup>7</sup> Veneer logs used in Colorado are of average saw-log quality.

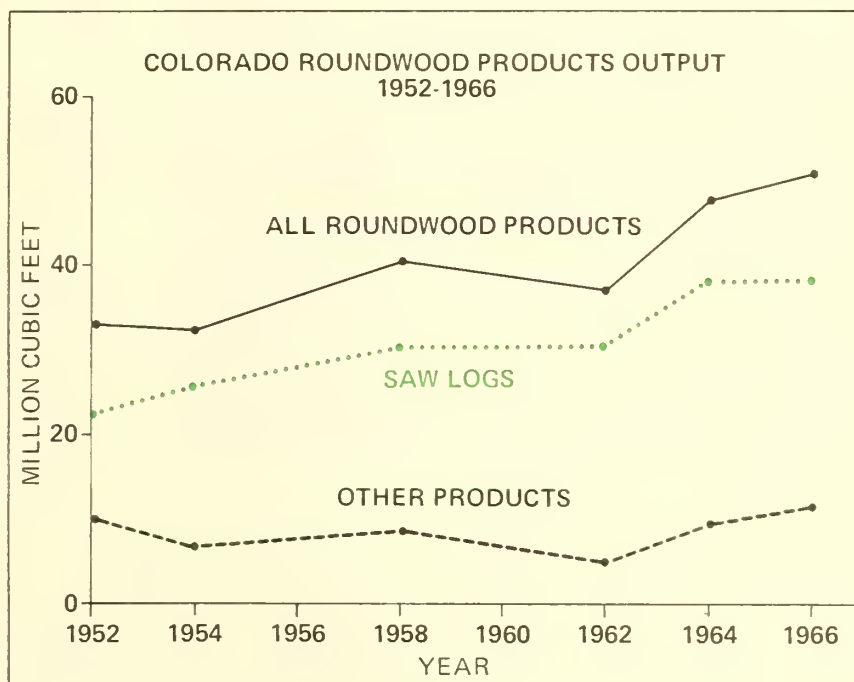


Figure 16

Table 17. — Roundwood products output, 1962 and 1966, and percent change

| Product                                    | Unit of measure         | 1962    | 1966    | Percent change |
|--|-------------------------|---------|---------|----------------|
| Saw logs                                   | Thousand board feet     | 184,645 | 252,145 | 37             |
| Veneer logs                                | Thousand board feet     | --      | 32,930  | --             |
| Pulpwood                                   | Thousand standard cords | 3       | 2       | -33            |
| Commercial poles                           | Thousand pieces         | 53      | 45      | -15            |
| Posts                                      | Thousand pieces         | 368     | 626     | 70             |
| Mine timbers                               | Thousand cubic feet     | 1,411   | 2,574   | 82             |
| Miscellaneous industrial wood <sup>1</sup> | Thousand cubic feet     | 1,316   | 593     | -55            |
| Miscellaneous farm timbers                 | Thousand cubic feet     | 373     | 921     | 147            |
| Fuelwood                                   | Thousand standard cords | 10      | 9       | -10            |
| All products                               | Thousand cubic feet     | 36,433  | 50,879  | 40             |

<sup>1</sup> Includes products such as house logs, excelsior bolts, match stock, and similar items.

for these other products, as well as for saw logs, are shown in table 17.

More than one-half the counties in Colorado contributed volume to roundwood products output for 1966. Of the 252 MMBF of saw logs harvested from Colorado timberlands, just under 12 percent came from Mineral County and 10 percent from Hinsdale County. Veneer-log output from within the State (33 MMBF) came from Dolores and Montezuma Counties with 65 and 35 percent respectively.

Nearly all products harvested from Colorado timberlands were used by industries within the State. The round pulpwood was exported to the Lake States and a portion of the commercial poles was shipped to Wyoming.

#### **Spruce led all species in product volume**

Spruce (mainly Engelmann spruce) led all species in total roundwood production as well as in both saw-log and veneer-log output. Spruce, ponderosa pine, and lodgepole pine accounted for nearly nine-tenths of all roundwood output in 1966 (figure 17). The relative importance of these species is shown as follows:

| Species        | All roundwood<br>(Percent) | Saw logs   |
|----------------|----------------------------|------------|
| Spruce         | 52                         | 60         |
| Ponderosa pine | 18                         | 14         |
| Lodgepole pine | 17                         | 14         |
| Other species  | 13                         | 12         |
| <b>Total</b>   | <b>100</b>                 | <b>100</b> |

Species other than those shown which are of some importance, especially for saw logs, are the true firs and Douglas-fir in that order.

The general increase in roundwood volume from 1962 to 1966 consisted mainly of substantial gains in output of ponderosa pine (123 percent) and spruce (68 percent). The output of lodgepole pine was down 28 percent and Douglas-fir, 16 percent.

#### **National Forests supplied nine-tenths of roundwood volume**

The National Forests of Colorado were the source of 46 MMCF, or 91 percent, of the roundwood products in 1966. Other public lands supplied 2.4 MMCF, or about 5 percent, and private lands, 2 MMCF, or 4 percent.

Output from National Forest lands in 1966 increased 56 percent over 1962. Output from all other classes of ownership decreased somewhat from 1962.

### Fewer sawmills produced more lumber

Colorado had 116 active sawmills in 1966 as compared to 170 in 1962. Average lumber production per mill has nearly doubled since 1962 and is up to 2.2 MMBF, but is below the Mountain States average of 6.4 MMBF. Table 18 presents production and number of sawmills for selected years. Almost the entire decrease in the total number of active mills occurred in the small size class, with most of these mills going out of business.

Lumber production shown in table 18 resulted from processing of logs imported from other States as well as those from Colorado timberlands. Saw-log imports into Colorado

amounted to 22 MMBF, with 64 percent coming from New Mexico and 36 percent from Wyoming. In addition to saw logs, a small number of posts were imported from Wyoming.

### Plant byproducts volume increased since 1962

The volume of byproducts in 1966 was 2.5 MMCF. Industrial sources of these materials and types of byproducts are shown in table 19.

The volume of byproducts in 1966 reflects an 80 percent increase over the 1962 volume. Although plant residues increased 25 percent since 1962, to 19.9 MMCF in 1966, there is evidence of better utilization in that wood chips (shipped mainly to Lake States plants) were being produced and increased quantities of residues were being used for fuel. The 1966 residues volume was about equally divided between coarse and fine material.



Figure 17

Table 18. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year   | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|--------|--------------------|---|----------------------------|
|                              |        | Number             | MMBF                                      | Percent                    |
| 10 million and more          | 1957 { | (2)                | (2)                                       | (2)                        |
|                              | 1962 } |                    |   |                            |
|                              | 1966   | 7                  | 16.9                                      | 47                         |
| 1 to 10 million              | 1957   | 47                 | 2.9                                       | 72                         |
|                              | 1962   | 45                 | 3.9                                       | 84                         |
|                              | 1966   | 35                 | 3.2                                       | 44                         |
| Less than 1 million          | 1957   | 227                | .2  | 28                         |
|                              | 1962   | 125                | .3  | 16                         |
|                              | 1966   | 74                 | .3  | 9                          |

<sup>1</sup> 1957 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census' lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

<sup>2</sup> To avoid the possibility of disclosing individual operations in 1957 and 1962, data for the few mills in this class were included in the 1 to 10 million class.

Table 19. — Volume of plant byproducts by industrial source and use class, 1966

| Industrial<br>source         | All<br>byproducts | Fiber <sup>1</sup> | Industrial<br>fuel | Domestic<br>fuel | Other<br>byproducts <sup>2</sup> |
|------------------------------|-------------------|--------------------|--------------------|------------------|----------------------------------|
| -----Million cubic feet----- |                   |                    |                    |                  |                                  |
| Lumber industry              | 2.1               | 0.2                | 0.6                | 0.2              | 1.1                              |
| Plywood industry             | .4                | 0                  | 0                  | 0                | .4                               |
| Total                        | 2.5               | 0.2                | 0.6                | 0.2              | 1.5                              |

<sup>1</sup> Mainly chips and sawdust for pulpwood.

<sup>2</sup> Includes livestock bedding, mulch, and small dimension and specialty items.

### Nearly all roundwood products came from growing stock

Over 97 percent (49 MMCF) of Colorado's harvest of roundwood products came from the growing stock inventory on commercial forest land. Cull and dead trees on commercial forest land and harvesting of trees on other lands provided the remaining volume of products. More than 87 percent (49 MMCF) of the total removals from growing stock went into roundwood products. Additional removals from growing stock were in the form of logging residues (8 percent, or 4 MMCF) and other removals through timber-stand im-

provement operations, land clearing, or changes in land use, estimated to be about 3 MMCF, or 5 percent of all removals from growing stock.

Total sawtimber removals from commercial forest land were 339 MMBF with more than 91 percent (310 MMBF) going into products. Logging residues accounted for 4 percent (12 MMBF), and other removals for about 5 percent (17 MMBF).

Tables 54 through 57, in Appendix B, present additional statistics concerning timber products of Colorado.



# NEVADA

## Product volume from Nevada timberlands in 1966 was smallest on record for any year

Output of roundwood products from Nevada timberlands in 1966 amounted to 223 MCF which was by far the smallest production of any of the Mountain States. The 1966 product volume for the State was the smallest of any of the years for which estimates are available over the period 1952 to 1966. Although Nevada's year-to-year timber production characteristically has been erratic, there is evidence that output followed a general upward trend from 1952 to 1958 and subsequently declined to less than the volume in 1952 (figure 18).

## Sawmills depended on logs from California

Nevada's timber industry is unique in several respects. Although the State has a large area of noncommercial forest that provides small-dimension material such as posts and fuelwood, it has relatively little commercial timberland. Heavy dependence has been placed on California as a source of saw logs. The unsubstantial timber supply situation, together with a small population and relatively limited local demand for wood products, has resulted in a small industry consisting mainly of the two sawmills not far from the California line. In 1966 these mills received their entire volume of saw logs (44.4 MMBF) from

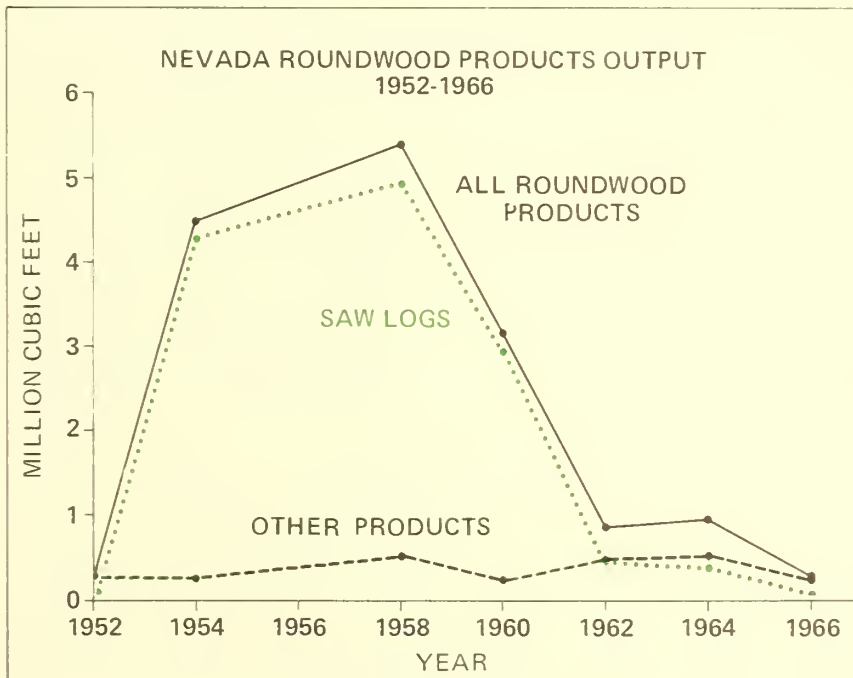


Figure 18

California. Although a small volume of saw logs was harvested in Nevada (11 MBF of ponderosa pine from White Pine County) it was shipped to industry in Utah. As shown by figure 18 saw logs accounted for less than one-half the volume of products harvested from Nevada timberlands in 1962 and succeeding years. In 1966 the volume reported for products other than saw logs consisted of 2,000 cords of fuelwood and 16,000 posts.

The source of the 1966 output of roundwood from Nevada timberlands by land ownership was as follows:

| <i>Land ownership class</i> | <i>MCF</i>        |
|-----------------------------|-------------------|
| <b>National Forest</b>      | <b>43</b>         |
| <b>Other public</b>         | <b>77</b>         |
| <b>Private</b>              | <b><u>103</u></b> |
| <b>Total</b>                | <b>223</b>        |

#### **Lumber production shows little recent change; byproduct volume up sharply**

Lumber production for Nevada in 1966 is reported by U. S. Bureau of the Census (1968) as 37 MMBF. As shown by the following tabulation of census estimates, this volume lies within the range of output for the preceding 6 years:

| <i>Year</i> | <i>Lumber production<br/>(MMBF)</i> |
|-------------|-------------------------------------|
| <b>1960</b> | <b>34</b>                           |
| <b>1961</b> | <b>31</b>                           |
| <b>1962</b> | <b>37</b>                           |
| <b>1963</b> | <b>33</b>                           |
| <b>1964</b> | <b>36</b>                           |
| <b>1965</b> | <b>39</b>                           |
| <b>1966</b> | <b>37</b>                           |

Although the two mills that produced the 37 MMBF in 1966 differed in size, an average of the two (18.5 MMBF) is useful for comparison with similarly derived averages for other Rocky Mountain States. The only State with a higher average was Arizona (19.2 MMBF). The average for all mills in the Rocky Mountain States was 6.4 million.

The volume of plant byproducts amounted to 1.8 MMCF in 1966 — 23 times the estimated output for 1962 — and came entirely from sawmills. Fifty-six percent of the 1966 volume went into industrial fuel, the remainder into pulp chips. Despite the big increase in plant byproducts, unused residues went up from 0.25 MMCF in 1962 to 1.83 million in 1966. The latter volume came entirely from sawmills and about 26 percent consisted of coarse residues (slabs, edgings, and trimmings) and 74 percent fine material (sawdust and shavings).

#### **Only one-third of roundwood output came from growing stock**

Of the 223 MCF of roundwood products harvested in Nevada in 1966, only 76 MCF or about one-third of the total came from the growing stock inventory on commercial forest land. The other two-thirds came largely from harvesting on other lands, although there may have been some material from cull and dead trees harvested within the commercial forest.

Total sawtimber removals from commercial forest land were 34 MBF with 97 percent going into products. Logging residues accounted for nearly all the remaining volume.

Tables 58 and 59, in Appendix B, present additional statistics concerning timber products of Nevada.

# NEW MEXICO

New Mexico timberlands in 1966 yielded 51 MMCF or 6 percent of the total output from lands within the Mountain States. The output showed an increase of 10 percent over 1962 and was nearly 1.8 times the volume in 1952 (figure 19). In comparison, production for the Mountain States increased 25 percent over the 1962-66 period and 79 percent between 1952 and 1966 (figure 20).

## Saw logs accounted for more than four-fifths of roundwood output

The volume of saw-log output in 1966 was 42 MMCF (271 MMBF) which represents an 18 percent increase since 1962. The saw-log

output constituted 83 percent of the total roundwood products output in 1966, about 5 percent more than in 1962. Since New Mexico has no plywood or pulp and paper industries, nearly all the remaining 9 MMCF of output (17 percent) consisted of posts, fuelwood, mine timbers, and miscellaneous farm timbers. The output of these products combined decreased 17 percent from 1962 volumes.

Saw logs continued to be the dominant timber product in New Mexico and their production in this State has maintained a fairly steady upward trend; this same trend has occurred in other Mountain States. New Mexico was the only Mountain State, however, to

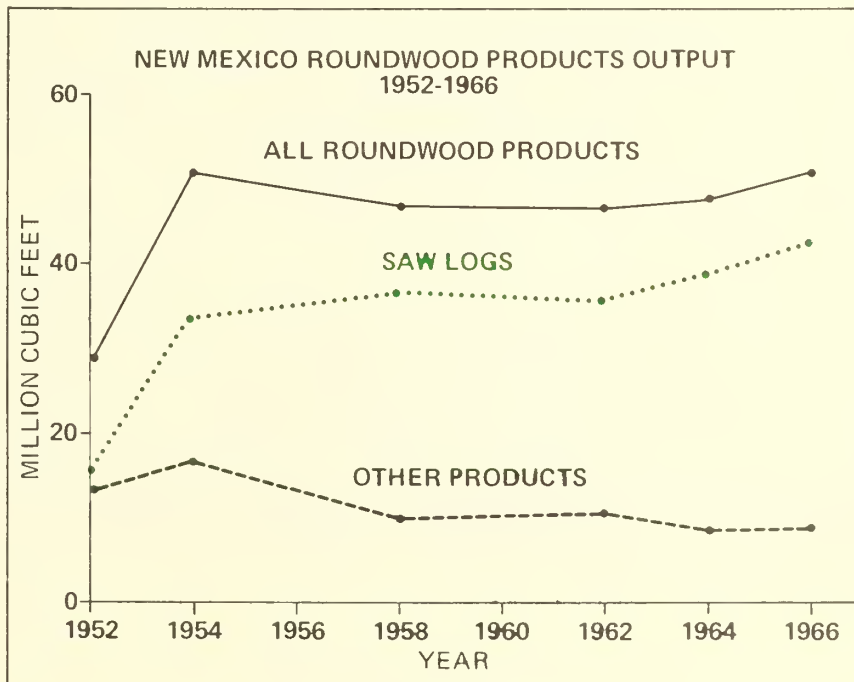


Figure 19





*Figure 20. — Saw-log harvesting on the Santa Fe National Forest in New Mexico. Saw logs were the predominant roundwood product in the Rocky Mountain States in 1966. However, the saw-log proportion of the total roundwood output for the Mountain States decreased from 88 percent in 1962 to 80 percent in 1966. New Mexico was the only State in which the proportion of total roundwood used for saw logs increased between 1962 and 1966.*



Table 20. — Roundwood products output, 1962 and 1966, and percent change

| Product                    | Unit of measure         | 1962                | 1966    | Percent change |
|----------------------------|-------------------------|---------------------|---------|----------------|
| Saw logs                   | Thousand board feet     | 247,620             | 271,485 | 10             |
| Posts                      | Thousand pieces         | 235                 | 163     | —31            |
| Mine timbers               | Thousand cubic feet     | 410                 | 236     | —42            |
| Miscellaneous farm timbers | Thousand cubic feet     | 183                 | 938     | 413            |
| Fuelwood                   | Thousand standard cords | 134                 | 85      | —37            |
| All products               | Thousand cubic feet     | <sup>1</sup> 46,259 | 50,986  | 10             |

<sup>1</sup> Includes small volumes of miscellaneous industrial wood.

show an increase in the percentage of roundwood output accounted for by saw logs. It was also the only State not showing an increase in the percentage of roundwood output contributed by products other than saw logs. Table 20 shows miscellaneous farm timbers as the only category of roundwood products, with the exception of saw logs, which were more significant in 1966 than in 1962.

Sandoval County contributed by far the largest percentage (27.5 percent) to roundwood output from New Mexico timberlands. Leading counties and the percentages contributed are as follows:

| County             | Percent     |
|--------------------|-------------|
| Sandoval           | 27.5        |
| McKinley           | 15.2        |
| Colfax             | 13.6        |
| Catron             | 10.6        |
| All other counties | <u>33.1</u> |
|                    | 100.0       |

About 14 MMBF of saw logs produced in New Mexico were exported to Colorado, leaving roughly 95 percent of the output for processing within the State.

#### Output was predominantly from ponderosa pine and public lands

Ponderosa pine, with 25 MMCF harvested for roundwood products, was by far the lead-

ing species in 1966. Other important species contributing to total roundwood output were Douglas-fir (9 million), spruce (7 million), and true firs (2 million). See figure 21.

Most species showed increases in volume harvested in 1966 compared to 1962; true firs led with a 42 percent increase. Douglas-fir and ponderosa pine followed with 24 and 10 percent increases, respectively. Spruce showed an 8 percent decline.

Public lands of New Mexico, principally National Forests and Navajo Indian Reservation lands, were the source of 29 MMCF of roundwood products in 1966, representing 57 percent of the total roundwood products output. Private lands supplied 22 MMCF or 43 percent. Output from National Forests in 1966 increased 31 percent to 26 MMCF as compared to 1962. Output from private ownership classes was down somewhat.

#### Sawmills decreased in number but showed an increase in average production

The number of active sawmills in New Mexico in 1966 decreased to 64 from the 85 mills active in 1962. The average production of the 64 mills was 4.1 MMBF as compared to the Mountain States average of 6.4 million for 1966. In comparison, average production of New Mexico's 85 mills in 1962 was 2.9 MMBF, and of the 117 mills in 1960, 1.9 million.

Table 21. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year   | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|--------|--------------------|---|----------------------------|
|                              |        | Number             | MMBF                                      | Percent                    |
| 10 million and more          | 1960 } | ( <sup>2</sup> )   | ( <sup>2</sup> )                          | ( <sup>2</sup> )           |
|                              | 1962 } |                    |   |                            |
|                              | 1966   | 6                  | 27.2                                      | 62                         |
| 1 to 10 million              | 1960   | 37                 | 5.2                                       | 85                         |
|                              | 1962   | 31                 | 7.3                                       | 93                         |
|                              | 1966   | 17                 | 5.1                                       | 33                         |
| Less than 1 million          | 1960   | 80                 | .4  | 15                         |
|                              | 1962   | 54                 | .3  | 7                          |
|                              | 1966   | 41                 | .3  | 5                          |

<sup>1</sup> 1960 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census' lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

<sup>2</sup> To avoid the possibility of disclosing individual operations in 1960 and 1962, data for the few mills in this class were included in the 1 to 10 million class.

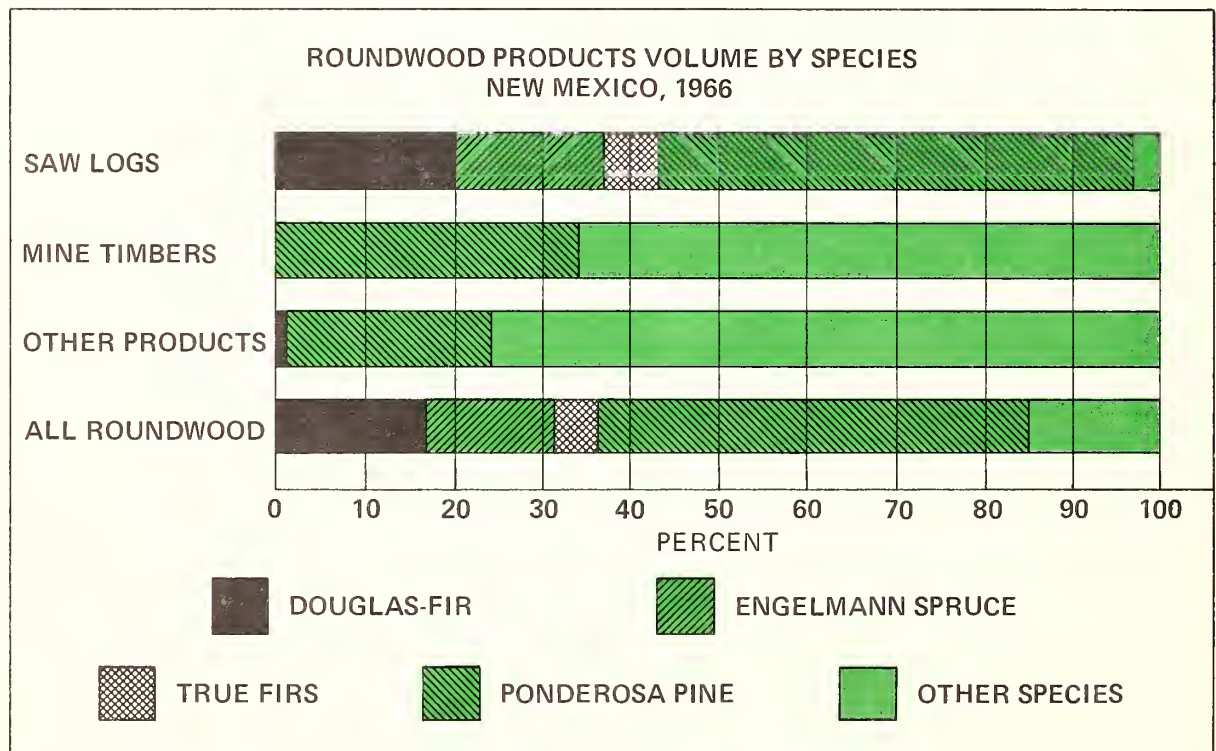


Figure 21

Information regarding the number of active sawmills and average production per mill for selected years is given in table 21.

Log receipts at New Mexico mills in 1966 included 4.6 MMBF received from Arizona. The volume of saw-log imports was considerably less than the 14.4 MMBF indicated earlier as exported to Colorado and represents less than 2 percent of the total saw-log receipts.

#### **Volume of plant byproducts increased; residue volume decreased**

The 1966 volume of plant byproducts amounted to 6.1 MMCF, all from the lumber industry. Distribution of this volume by type of product is as follows:

| <i>Byproduct</i>    | <i>MCF</i> |
|---------------------|------------|
| Wood chips for pulp | 4,501      |
| Industrial fuel     | 1,314      |
| Domestic fuel       | 68         |
| Other <sup>1</sup>  | 237        |

---

<sup>1</sup>*Includes such byproducts as livestock bedding, mulch, and small dimension and specialty items.*

The 1966 volume of byproducts represents slightly more than three times the volume produced in 1962. This increased utilization, especially the production of wood chips (shipped mainly to Arizona), partially explains the reduction in plant residues from 18

MMCF in 1962 to 16 million in 1966. Between 1962 and 1966, coarse residues showed a reduction of 30 percent, while fine residues increased about 7 percent.

#### **Nearly all roundwood products were cut from growing stock**

Of the total volume of roundwood products harvested in New Mexico in 1966, 84 percent, or 43 MMCF, came from the growing stock inventory on commercial forest land. The remaining 16 percent of roundwood products came from harvesting of trees on other lands and from cull and dead trees on commercial forest land.

Eighty-seven percent of the total removals from growing stock went into roundwood products. Additional removals from growing stock were in the form of logging residues (10 percent, or 5.1 MMCF) and other removals through timber-stand improvement operations, land clearing, or changes in land use, estimated to be 1.3 MMCF, or 3 percent of all removals from growing stock.

Total sawtimber removals from commercial forest land were 290 MMBF with 92 percent (266 MMBF) going into products; logging residues accounted for 5 percent (16 MMBF), and other removals for 3 percent (8 MMBF).

Tables 60 through 62, in Appendix B, present additional statistics concerning timber products of New Mexico.

# UTAH

Output of roundwood products from Utah timberlands in 1966 amounted to 14 MMCF; this volume was less than 2 percent of the total obtained from all lands within the Mountain States. Production showed an increase of 17 percent over 1962 and was a little more than double the 1952 volume (figure 22). In comparison, production for the Mountain States increased 25 percent over the 1962-1966 period and 79 percent between 1952 and 1966.

**Saw logs accounted for most of product volume; all products increased since 1962**

The 1966 saw-log volume of 12.1 MMCF

(77.8 MMBF) constituted 86 percent of the total volume of roundwood products. The remainder of the volume consisted of mine and farm timbers, posts, fuelwood, and miscellaneous industrial wood. Statistics on output for selected years during the period of 1952-1966 indicate that saw-log output has pretty much paralleled total roundwood output (figure 22); from 1960 on, saw logs have comprised more than 85 percent of the volume. Table 22 indicates that all products showed an increased volume in 1966 as compared with 1962, and that percentagewise most products increased to a greater extent than saw logs.

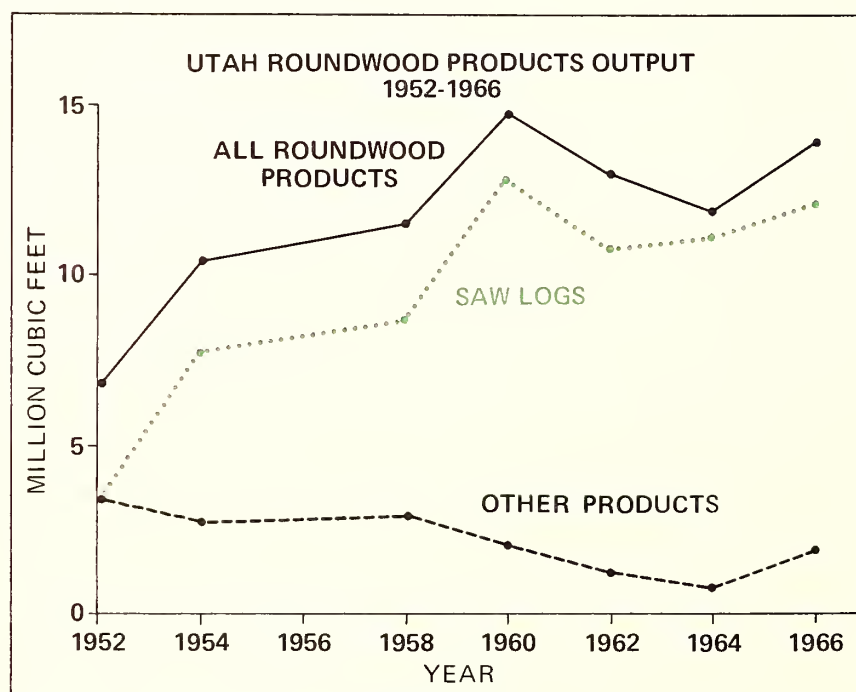


Figure 22



Table 22. — Roundwood products output, 1962 and 1966, and percent change

| Product                                    | Unit of measure         | 1962   | 1966   | Percent change |
|--|-------------------------|--------|--------|----------------|
| Saw logs                                   | Thousand board feet     | 64,938 | 77,750 | 20             |
| Posts <sup>1</sup>                         | Thousand pieces         | 16     | 60     | 275            |
| Mine timbers                               | Thousand cubic feet     | 245    | 455    | 86             |
| Miscellaneous industrial wood <sup>2</sup> | Thousand cubic feet     | 703    | 735    | 5              |
| Miscellaneous farm timbers                 | Thousand cubic feet     | 88     | 306    | 248            |
| Fuelwood                                   | Thousand standard cords | 1      | 4      | 300            |
| All products                               | Thousand cubic feet     | 12,005 | 14,030 | 17             |

<sup>1</sup>Includes commercial poles to avoid disclosure of individual operations.

<sup>2</sup>Includes products such as converter poles, excelsior bolts, and similar items.

Two counties provided the major portion of the saw-log output from Utah timberlands — San Juan (32.1 percent) and Garfield (31.5 percent). Duchesne County with 11.4 percent was third.

Except for 1.5 MMBF of logs exported to mills in Wyoming, all material harvested in Utah was processed by industries within the State.

#### Product volume was one-half ponderosa pine and mainly from National Forest lands

Ponderosa pine was by far the leading spe-

cies and constituted one-half of the total cubic volume of roundwood. Other leading species were Engelmann spruce (19 percent) and lodgepole pine (18 percent). Important differences occurred among individual products or product groups with respect to relative significance of species, as shown in table 23.

Ponderosa pine made the greatest gain in recent years — about three times the 1962 volume was harvested in 1966. Lodgepole pine increased 22 percent but Engelmann spruce decreased 34 percent, and the combined volume of other species dropped 48 percent.

Table 23. — Percent distribution of roundwood products by species, 1966

| Product                             | Engelmann spruce | Lodgepole pine | Ponderosa pine | Other species | Total all species |
|-------------------------------------|------------------|----------------|----------------|---------------|-------------------|
| -----Percent-----                   |                  |                |                |               |                   |
| Saw logs                            | 20               | 12             | 57             | 11            | 100               |
| Mine timbers                        | 9                | 87             | 1              | 3             | 100               |
| Miscellaneous industrial wood       | 28               | 47             | 0              | 25            | 100               |
| Posts, fuelwood, misc. farm timbers | 1                | 43             | 2              | 54            | 100               |
| All products                        | 19               | 18             | 50             | 13            | 100               |

Table 24. — Active sawmills and average annual production by production class

| Production class<br>(BF/yr.) | Year   | Active<br>sawmills | Average annual<br>production <sup>1</sup> | Total<br>lumber production |
|------------------------------|--------|--------------------|---|----------------------------|
|                              |        | Number             | MMBF                                      | Percent                    |
| 10 million and more          | 1960 } | ( <sup>2</sup> )   | ( <sup>2</sup> )                          | ( <sup>2</sup> )           |
|                              | 1962 } |                    |   |                            |
|                              | 1966   | 2                  | 19.8                                      | 55                         |
| 1 to 10 million              | 1960   | 12                 | 3.9                                       | 68                         |
|                              | 1962   | 17                 | 3.4                                       | 86                         |
|                              | 1966   | 11                 | 2.3                                       | 35                         |
| Less than 1 million          | 1960   | 87                 | .3  | 32                         |
|                              | 1962   | 56                 | .2  | 14                         |
|                              | 1966   | 37                 | .2  | 10                         |

<sup>1</sup> 1960 averages derived from a cooperative lumber survey by the Bureau of the Census and the Intermountain Station; 1962 and 1966 averages obtained by prorating the Bureau of the Census' lumber production figures among mill classes on the basis of the Intermountain Station's surveys of saw-log receipts.

<sup>2</sup> To avoid the possibility of disclosing individual operations in 1960 and 1962, data for the few mills in this class were included in the 1 to 10 million class.

Ninety percent of the product volume came from National Forest lands. State, Indian, and Bureau of Land Management lands provided 4 percent and private lands 6 percent.

#### Number of sawmills continued to decline; production increased

The trend over recent years towards fewer mills but greater average production per mill continued in 1966. Average production of the 50 mills active in 1966 was 1.44 MMBF. In comparison, average production of the 73 mills in 1962 was 0.92 million feet, and of the 99 mills in 1960, 0.70 million feet. As a further comparison, average production of all mills in the Mountain States in 1966 was 6.4 MMBF. Table 24 permits comparisons for 1960, 1962, and 1966 of Utah mills by selected size-class groupings.

Log receipts at Utah mills consisted almost entirely of material harvested from timberlands within the State. A very small volume (11 MBF) was imported from Nevada.

#### Plant byproducts and residues both increased

The volume of plant byproducts in 1966

amounted to 0.5 MMCF. About 88 percent of this material was used for livestock bedding, mulch, and small dimension and specialty items; the remainder was industrial and domestic fuelwood.

Production of plant byproducts has never been a significant feature of Utah timber industries. No volume was reported for 1962, although some material undoubtedly was used for fuelwood. The lack of a nearby market for pulp chips has been a handicap. No output of chips was reported for 1966, but subsequent production by at least one mill is expected to increase the volume of plant byproducts in future years.

Six MMCF of residue resulted from processing of roundwood by Utah timber industries in 1966. Roughly one-half of this volume was coarse residues (slabs, edgings, and trimmings) and one-half fine material (sawdust and shavings). Ninety-five percent of the residue volume resulted from lumber production, the remainder from the variety of miscellaneous timber industries. In comparison with 1962, residue volume was up 29 percent. This contrasts with a 19 percent reduction for the Mountain States area over the same period.

### **Bulk of product volume came from growing stock inventory**

Of the total volume of roundwood products harvested in Utah in 1966, 94 percent, or 13 MMCF, came from the growing stock inventory on commercial forest land. Cull and dead trees on commercial forest land and timber harvesting on other lands accounted for the remaining 6 percent.

Eighty-five percent of the total removals from growing stock went into roundwood

products; the remainder (2.3 MMCF) was logging residues and trees lost from inventory as a result of timber-stand improvement operations, land clearing, and changes in land use.

Total sawtimber removals from commercial forest land were 85 MMBF with 89 percent (75 MMBF) going into products. Logging residues and other removals accounted for the remaining volume.

Tables 63 through 65, in Appendix B, present additional statistics concerning timber products of Utah.

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**APPENDIX A**  
**Terminology**  
**Survey Methods and**  
**Reliability of Data**

# Terminology

## Cull Tree

Live tree of sawtimber or poletimber size that is unmerchantable for saw logs, now or prospectively, because of rot or other defect, or species.

## Forest Land

Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. (Note: Stocking is measured by comparison of basal area and/or number of trees, by age or size and spacing with specified standards. The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width at least 120 feet wide to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet in width.)

The principal classes of forest land are:

*Commercial forest land.* — Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. (Note: Areas qualifying as commercial forest land have the capability of producing in excess of 20 cubic feet per acre per year of industrial wood under management. Currently inaccessible and inoperable areas are included, except when the areas involved are small and unlikely to become suitable for production of industrial wood in the foreseeable future.)

*Noncommercial forest land.* — (1) Unproductive forest land incapable of yielding crops of industrial wood, because of adverse site conditions, and (2) productive-reserved forest land.

## Growing Stock Trees

Live trees of commercial species qualifying as desirable or acceptable trees. (Note: Excludes rough, rotten, and dead trees.)

## Growing Stock Volume

Net volume in cubic feet of growing stock trees 5.0 inches d.b.h. and over from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem or to the point where the central stem breaks into limbs.

## Hardwoods

Dicotyledonous trees, usually broad-leaved and deciduous.

## Industrial Wood

All roundwood products, except fuelwood.

## Logging Residues from Growing Stock

The net cubic-foot volume of live sawtimber and poletimber trees cut or killed by logging on commercial forest land and not converted to timber products.

## Other Removals

The net volume of growing stock trees removed from the inventory by cultural operations, such as timber-stand improvements, land clearing, and changes in land use.

## Ownership

Property owned by one owner, regardless of the number of parcels in a specified area.

## Ownership Classes

*National Forest lands.* — Federal lands which have been legally designated by Executive order or statute as National Forests or purchase units, and other lands under the administration of the USDA Forest Service, including experimental areas and Bankhead-Jones Title III lands.

*Other public lands.* — Federal lands other than National Forests, including lands administered by the Bureau of Land Management, Bureau of Indian Affairs, and miscellaneous Federal agencies. Also, lands owned by States, counties, and local public agencies, or lands

leased by these governmental units for more than 50 years.

*Forest industry lands.* — Lands owned by companies or individuals operating wood-using plants.

*Other private lands.* — Privately owned lands other than forest industry lands.

## Plant Byproducts

Wood products, such as pulp chips, obtained incidental to production of other manufactured products.

## Plant Residues

Wood materials from manufacturing plants not utilized for some product. (Note: Includes slabs, edgings, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screenings.)

## Poletimber Tree

Growing stock trees of commercial species at least 5.0 inches d.b.h., but smaller than sawtimber size.

## Principal Tree Species

### Softwoods

|                     |  |
|---------------------|--|
| Douglas-fir         | <i>Pseudotsuga menziesii</i>               |
| Fir, subalpine      | <i>Abies lasiocarpa</i>                    |
| Fir, corkbark       | <i>A. lasiocarpa</i> var. <i>arizonica</i> |
| Fir, grand          | <i>A. grandis</i>                          |
| Fir, white          | <i>A. concolor</i>                         |
| Hemlock, mountain   | <i>Tsuga mertensiana</i>                   |
| Hemlock, western    | <i>T. heterophylla</i>                     |
| Juniper             | <i>Juniperus</i> spp.                      |
| Larch, western      | <i>Larix lyallii</i>                       |
| Pine, limber        | <i>Pinus flexilis</i>                      |
| Pine, lodgepole     | <i>P. contorta</i>                         |
| Pine, ponderosa     | <i>P. ponderosa</i>                        |
| Pine, western white | <i>P. monticola</i>                        |
| Pine, whitebark     | <i>P. albicaulis</i>                       |
| Pine, pinyon        | <i>P. spp.</i>                             |
| Redcedar, western   | <i>Thuja plicata</i>                       |
| Spruce, Engelmann   | <i>Picea engelmannii</i>                   |
| Spruce, blue        | <i>P. pungens</i>                          |
| Spruce, white       | <i>P. glauca</i>                           |

### Hardwoods

|                |                            |
|----------------|----------------------------|
| Aspen, quaking | <i>Populus tremuloides</i> |
| Cottonwood     | <i>P. spp.</i>             |
| Birch, paper   | <i>Betula papyrifera</i>   |

## Roundwood Products

Logs, bolts, or other round sections cut from trees for industrial or consumer uses. (Note: Includes saw logs; veneer logs and bolts; cooperage logs and bolts; pulpwood; fuelwood; pilings; poles; posts; hewn ties; mine timbers; and various other round, split, or hewn products.)

## Saw Log

A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight and with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods) or other combinations of size and defect specified by Regional standards.

## Sawtimber Trees

Live trees of commercial species containing at least a 12-foot saw log and meeting Regional specifications for freedom from defect. Softwoods must be at least 9.0 inches in diameter breast height, except in California, Oregon, Washington, and coastal Alaska where the minimum diameter is 11.0 inches. Hardwoods must be at least 11.0 inches in diameter in all States.

## Sawtimber Volume

Net volume of the saw-log portion of live sawtimber in board feet, International 1/4-inch rule.

## Softwoods

Coniferous trees, usually evergreen having needles or scalelike leaves.

## Timber Products

Roundwood products and plant byproducts. (Note: Timber products output includes

roundwood products cut from growing stock on commercial forest land; from other sources, such as cull trees, salvable dead trees, limbs, and saplings; from trees on noncommercial and nonforest lands, and from plant byproducts.)

## Timber Removals

The net volume of growing stock trees removed from the inventory by harvesting; cultural operations, such as timber-stand improvement; land clearing; or changes in land use.

## Survey Methods and Reliability of Data

The 1966 survey of saw-log receipts was based on a listing of sawmills in the Rocky Mountain States prepared early in 1967, and made as complete as possible through reviews by Forest Service and State forestry personnel. Operators of all listed mills were contacted by mail to obtain their saw-log receipts for 1966. Also, sawmills outside the Rocky Mountain States considered as possible recipients of logs from the Rocky Mountain States were asked to report. Field sampling provided data for estimating, within acceptable error limits, the receipts of sawmill operators who did not furnish mail reports (nonrespondents).

The half-confidence intervals for estimates of 1966 State totals are shown below. The true totals are predicted to lie within plus or minus their respective half-confidence intervals of the estimated totals. The odds are two to one that the confidence interval prediction is correct.

| State                | Half-confidence<br>interval for<br>saw logs<br>(MBF) | Half-confidence<br>interval of total<br>saw-log receipts<br>(Percent) |
|----------------------|--|---|
| Idaho                | 7,636  | 0.46  |
| Montana              | 12,153   | .97   |
| Western South Dakota | 963  | 2.17  |
| Wyoming              | 6,050  | 3.49  |
| Arizona              | ( <sup>1</sup> )                                     | 0   |
| Colorado             | 7,875  | 3.12  |
| Nevada               | ( <sup>1</sup> )                                     | 0   |
| New Mexico           | 3,768  | 1.39  |
| Utah                 | 409  | .53   |

<sup>1</sup> Reports obtained from all mills.

All veneer and plywood plants known to receive veneer logs from the Rocky Mountain States were contacted by mail to obtain their veneer log receipts. Nonrespondents were contacted in the field. Estimates for veneer-log receipts in Colorado and Idaho are considered to be without sampling error since reports were obtained from all plants. The estimated total volume of veneer-log receipts from Montana plants was 183,449 MBF. Sixty-six percent of this volume was reported directly from five of the six plants operating in the State in 1966. The volume of receipts for the remaining plant was an estimate based on 1966 plywood production figures for the plant.

Reports were obtained by mail, and field contacts were made with all nonrespondent plants known to receive round pulpwood, commercial poles, and miscellaneous industrial wood from the Rocky Mountain States in 1966. Estimates for these products are considered to be without sampling error.

Estimates for 1966 production of posts, fuelwood, and miscellaneous farm timbers were derived from reports furnished by National Forests, State forestry offices, Bureau of Land Management, Bureau of Indian Affairs, and Bureau of Reclamation. These estimates were supplemented by trend estimates from U. S. Bureau of Census publications showing farm use of these products. Since this procedure precluded the computation of a sampling error by the methods used for other products, no error estimates have been assigned.



Procedures for the survey of round mine timbers received at Rocky Mountain States mines were similar to those used for saw-log receipts. Mail contacts were made from lists of mine operators compiled from reports of State mine inspectors, State mining bureaus, and State industrial commissions. The Mining World Directory of Major United States Mining Operations was also used. Nonrespondents were sampled by field contacts. The half-confidence intervals for estimates of 1966 State totals are shown below. The true totals are predicted to lie within plus or minus their respective half-confidence intervals of the estimated totals. The odds are two to one that the confidence interval prediction is correct.

| State                | Half-confidence<br>interval for round<br>mine timbers | Half-confidence<br>interval of total<br>round mine-<br>timber receipts |
|----------------------|---|--|
|                      | (MBF)<br>( <sup>1</sup> )                             | (Percent)  |
| Idaho                | ( <sup>1</sup> )                                      | 0  |
| Montana              | 9,511   | .32  |
| Western South Dakota | ( <sup>1</sup> )                                      | 0  |
| Wyoming              | 176   | .04  |
| Arizona              | ( <sup>1</sup> )                                      | 0  |
| Colorado             | 77,810  | 3.02   |
| Nevada               | ( <sup>2</sup> )                                      | 0  |
| New Mexico           | ( <sup>1</sup> )                                      | 0  |
| Utah                 | 5,712   | 1.25   |

<sup>1</sup> All field sample mines contacted reported no round mine-timber receipts.

<sup>2</sup> No round mine-timber receipts reported.



# **APPENDIX B**

Tables 25-65

# ROCKY MOUNTAIN STATES

Table 25. — Output of roundwood products from timberlands of the Rocky Mountain States by product and State, 1966

| State           | Total output<br>: all products | Products |             |          |                      |                 |                                   |  | Thousand cubic feet |  |
|-----------------|--------------------------------|----------|-------------|----------|----------------------|-----------------|-----------------------------------|--|---------------------|--|
|                 |                                | Saw logs | Veneer logs | Pulpwood | Commercial<br>poles/ | Mine<br>timbers | Miscellaneous/<br>industrial wood | Posts, fuelwood<br>: miscellaneous<br>: farm timbers |                     |  |
| Idaho           | 316,188                        | 259,806  | 39,236      | 9,172    | 3,571                | 142             | 751                               |  | 3,510               |  |
| Montana         | 238,231                        | 195,603  | 27,884      | 3,753    | 2,472                | 2,974           | 256                               |  | 5,289               |  |
| W. South Dakota | 15,859                         | 6,912    | --          | 4,645    | --                   | 1               | --                                |  | <u>3</u> /<br>4,301 |  |
| Wyoming         | 33,523                         | 27,065   | --          | 141      | 3,616                | 478             | 28                                |  | 2,195               |  |
| Arizona         | 89,873                         | 62,437   | --          | 6,647    | 335                  | 22              | 86                                |  | 20,346              |  |
| Colorado        | 50,879                         | 39,335   | 5,005       | 201      | 837                  | 2,574           | 593                               |  | 2,334               |  |
| Nevada          | 223                            | 2        | --          | --       | --                   | --              | --                                |  | 221                 |  |
| New Mexico      | 50,986                         | 42,352   | --          | --       | --                   | 236             | --                                |  | 8,398               |  |
| Utah            | 14,030                         | 12,129   | --          | --       | --                   | 455             | 735                               |  | <u>3</u> /<br>711   |  |
| Total           | 809,792                        | 645,641  | 72,125      | 24,559   | 10,831               | 6,882           | 2,449                             |  | 47,305              |  |

<sup>1</sup>/ Includes a small amount of piling.

<sup>2</sup>/ Includes house logs, converter poles, shingle bolts, excelsior bolts, match stock, charcoal wood, and similar items.

<sup>3</sup>/ Includes a small volume of commercial poles to avoid disclosure of individual operations.



Table 26. — Output of roundwood products from timberlands in the Rocky Mountain States by product, species group, and State, 1966

(In standard units)

| State           | Saw logs                          |            |            | Veneer logs |            |            | Mine timbers |            |            | Miscellaneous industrial wood <sup>1/</sup> |            |            | Miscellaneous farm timbers |            |            |
|-----------------|-----------------------------------|------------|------------|-------------|------------|------------|--------------|------------|------------|---|------------|------------|----------------------------|------------|------------|
|                 | All species                       | Soft-woods | Hard-woods | All species | Soft-woods | Hard-woods | All species  | Soft-woods | Hard-woods | All species                                 | Soft-woods | Hard-woods | All species                | Soft-woods | Hard-woods |
|                 | Thousand board feet <sup>3/</sup> |            |            |             |            |            |              |            |            |   |            |            |                            |            |            |
| Idaho           | 1,665,425                         | 1,665,172  | 253        | 258,129     | 256,977    | 1,152      | 142          | 142        | --         | 751   | 751        | 0          | 1,525                      | 1,525      | --         |
| Montana         | 1,253,868                         | 1,253,543  | 325        | 183,449     | 182,304    | 1,145      | 2,974        | 2,974      | --         | 256   | 256        | 0          | 3,027                      | 3,027      | --         |
| W. South Dakota | 44,308                            | 44,308     | --         | 0           | 0          | 0          | 1            | 1          | --         | --  | --         | --         | 447                        | 447        | --         |
| Wyoming         | 173,491                           | 173,491    | --         | 0           | 0          | 0          | 478          | 478        | --         | 28  | 28         | 0          | 1,768                      | 1,698      | 70         |
| Arizona         | 400,246                           | 399,564    | 672        | 0           | 0          | 0          | 22           | (6/)       | 22         | 86  | 8          | 78         | 556                        | 556        | --         |
| Colorado        | 252,145                           | 246,100    | 6,045      | 32,930      | 32,838     | 92         | 2,574        | 2,571      | 3          | 593   | 29         | 564        | 921                        | 921        | --         |
| Nevada          | 11                                | 11         | 0          | 0           | 0          | 0          | --           | --         | --         | --  | --         | --         | --                         | --         | --         |
| New Mexico      | 271,485                           | 267,033    | 4,452      | 0           | 0          | 0          | 236          | 81         | 155        | --  | --         | --         | 938                        | 938        | --         |
| Utah            | 77,750                            | 75,381     | 2,369      | 0           | 0          | 0          | 455          | 453        | 2          | 735   | 735        | 0          | 306                        | 306        | --         |
| Total           | 4,138,719                         | 4,124,603  | 14,116     | 474,508     | 472,119    | 2,389      | 6,882        | 6,700      | 182        | 2,449                                       | 1,807      | 642        | 9,488                      | 9,418      | 70         |

| State           | Pulpwood                |            |            | Fuelwood    |            |            | Commercial poles <sup>2/</sup> |            |            | Posts       |            |            |
|-----------------|-------------------------|------------|------------|-------------|------------|------------|--------------------------------|------------|------------|-------------|------------|------------|
|                 | All species             | Soft-woods | Hard-woods | All species | Soft-woods | Hard-woods | All species                    | Soft-woods | Hard-woods | All species | Soft-woods | Hard-woods |
|                 | Thousand standard cords |            |            |             |            |            |                                |            |            |             |            |            |
| Idaho           | 107                     | 105        | 2          | 15          | 15         | (4/)       | 133                            | 10         | 0          | 699         | 699        | 0          |
| Montana         | 44                      | 44         | 0          | 8           | 8          | --         | 133                            | 133        | 0          | 1,569       | 1,569      | 0          |
| W. South Dakota | 54                      | 54         | 0          | 8           | 8          | --         | (52/)                          | (52/)      | 0          | 1,994       | 1,994      | 0          |
| Wyoming         | 2                       | 2          | 0          | 2           | 2          | --         | (2/)                           | (2/)       | 0          | 292         | 292        | 0          |
| Arizona         | 77                      | 77         | 0          | 226         | 226        | --         | 18                             | 18         | 0          | 398         | 398        | 0          |
| Colorado        | 2                       | 2          | 0          | 9           | 9          | (4/)       | 44                             | 44         | 0          | 626         | 621        | 5          |
| Nevada          | 0                       | 0          | 0          | 2           | 2          | --         | 0                              | 0          | 0          | 16          | 16         | (1/)       |
| New Mexico      | --                      | --         | --         | 85          | 85         | --         | 0                              | 0          | 0          | 163         | 163        | 0          |
| Utah            | 0                       | 0          | 0          | 4           | 4          | (4/)       | (1/)                           | (1/)       | 0          | 60          | 60         | 0          |
| Total           | 286                     | 284        | ?          | 359         | 359        | --         | (645                           | (445       | 0          | 5,817       | 5,812      | 5          |

<sup>1/</sup> Includes house logs, converter poles, shingle bolts, excelsior bolts, match stock, charcoal wood, and similar items.

<sup>2/</sup> Includes a small amount of piling.

<sup>3/</sup> International 1/4-inch log rule.

<sup>4/</sup> Less than 0.5 M standard cords.

<sup>5/</sup> Data for Wyoming and South Dakota combined to avoid revealing individual operations.

<sup>6/</sup> Less than 0.5 MCF.

<sup>7/</sup> Less than 0.5 M pieces.

Table 27. — *Output of roundwood products from timberlands of the Rocky Mountain States by species and State, 1966*

| State           | : All species | : Species   |            |             |         |                     |           |              |        |         |             |
|-----------------|---------------|-------------|------------|-------------|---------|---------------------|-----------|--------------|--------|---------|-------------|
|                 |               | : Ponderosa | : Douglas- | : Engelmann | : True, | : Lodgepole         | : Western | : Western    | : 3/:  | : Other | : 4/:       |
|                 |               | : pine      | : fir      | : spruce    | : fir   | : pine              | : larch   | : white pine |        |         | : hardwoods |
|                 |               |             |            |             |         | Thousand cubic feet |           |              |        |         |             |
| Idaho           | 316,188       | 46,012      | 65,954     | 16,061      | 61,897  | 9,964               | 26,610    | 61,978       | 27,337 |         | 375         |
| Montana         | 238,231       | 36,141      | 80,731     | 26,199      | 5,865   | 32,387              | 45,832    | 5,802        | 5,049  |         | 225         |
| W. South Dakota | 15,859        | 15,447      | --         | 412         | --      | --                  | 0         | 0            | --     |         | --          |
| Wyoming         | 33,523        | 6,995       | 1,076      | 4,965       | 605     | 19,742              | 0         | 0            | 70     |         | 70          |
| Arizona         | 89,873        | 62,372      | 6,442      | 693         | 3,816   | 0                   | 0         | 0            | 16,345 |         | 205         |
| Colorado        | 50,879        | 9,338       | 1,222      | 26,481      | 3,015   | 8,720               | 0         | 0            | 534    |         | 1,569       |
| Nevada          | 223           | 24          | --         | --          | 23      | --                  | 0         | --           | 176    |         | (5/)        |
| New Mexico      | 50,986        | 25,047      | 8,570      | 7,214       | 2,442   | --                  | 0         | 0            | 6,862  |         | 851         |
| Utah            | 14,030        | 6,976       | 485        | 2,619       | 524     | 2,516               | 0         | 0            | 367    |         | 543         |
| Total           | 809,792       | 208,352     | 164,480    | 84,644      | 78,187  | 73,329              | 72,442    | 67,780       | 56,740 |         | 3,838       |

1/ Includes blue and white spruce.

2/ Includes grand, white, subalpine, and corkbark firs.

3/ Includes a small amount of limber and whitebark pines.

4/ Includes principally western redcedar, western hemlock, pinyon pine, and juniper.

5/ Less than 0.5 MCF.

Table 28. — *Output of roundwood products from timberlands of the Rocky Mountain States by land ownership class and State, 1966*

| State           | Land ownership classes |                 |                 |                     |                  | All<br>ownships |
|-----------------|------------------------|-----------------|-----------------|---------------------|------------------|-----------------|
|                 | National<br>Forest     | Other<br>public | Other<br>Forest | Forest<br>industry  | Other<br>private |                 |
|                 |                        |                 |                 | Thousand cubic feet |                  |                 |
| Idaho           | 173,318                | 36,304          | 70,578          | 35,988              | 316,188          |                 |
| Montana         | 141,431                | 22,108          | 39,331          | 35,361              | 238,231          |                 |
| W. South Dakota | 13,221                 | 1,036           | 1,057           | 545                 | 15,859           |                 |
| Wyoming         | 31,023                 | 1,145           | --              | 1,355               | 33,523           |                 |
| Arizona         | 67,197                 | 21,477          | 1,060           | 139                 | 89,873           |                 |
| Colorado        | 46,198                 | 2,420           | 263             | 1,998               | 50,879           |                 |
| Nevada          | 43                     | 77              | --              | 103                 | 523              |                 |
| New Mexico      | 26,152                 | 3,023           | 7,074           | 14,737              | 50,986           |                 |
| Utah            | 12,617                 | 576             | (1/)            | 837                 | 14,030           |                 |
| Total           | 511,200                | 88,166          | 119,363         | 91,063              | 809,792          |                 |
| Percent         | 63.13                  | 10.89           | 14.74           | 11.24               | 100.00           |                 |

1/ Less than 0.5 MCF.





Table 30. — Estimated volume of plant residues<sup>1</sup> in the Rocky Mountain States, by industrial source, type of material, and State, 1966

| State                           | All industries       |        |                    | Lumber industry      |        |                    | Veneer and plywood industry |       |                    | Other primary industries |       |                    |
|---------------------------------|----------------------|--------|--------------------|----------------------|--------|--------------------|-----------------------------|-------|--------------------|--------------------------|-------|--------------------|
|                                 | Coarse <sup>2/</sup> |        | Fine <sup>3/</sup> | Coarse <sup>2/</sup> |        | Fine <sup>3/</sup> | Coarse <sup>2/</sup>        |       | Fine <sup>3/</sup> | Coarse <sup>2/</sup>     |       | Fine <sup>3/</sup> |
|                                 | Total                |        |                    | Total                |        |                    | Total                       |       |                    | Total                    |       |                    |
| ----- Thousand cubic feet ----- |                      |        |                    |                      |        |                    |                             |       |                    |                          |       |                    |
| Idaho                           | 56,383               | 23,245 | 33,138             | 55,495               | 22,808 | 32,687             | 122                         | 122   | 0                  | 766                      | 315   | 451                |
| Montana                         | 38,011               | 12,653 | 25,358             | 36,924               | 11,858 | 25,066             | 657                         | 657   | 0                  | 430                      | 138   | 292                |
| W. South Dakota                 | 2,224                | 741    | 1,483              | 2,062                | 687    | 1,375              | 0                           | 0     | 0                  | 162                      | 54    | 108                |
| Wyoming                         | 11,943               | 5,933  | 6,010              | 10,743               | 5,337  | 5,406              | 0                           | 0     | 0                  | 1,200                    | 596   | 604                |
| Arizona                         | 13,235               | 4,741  | 8,494              | 13,160               | 4,714  | 8,446              | 0                           | 0     | 0                  | 75                       | 27    | 48                 |
| Colorado                        | 19,866               | 10,622 | 9,244              | 18,006               | 9,022  | 8,984              | 1,339                       | 1,339 | 0                  | 521                      | 261   | 260                |
| Nevada                          | 1,832                | 472    | 1,360              | 1,832                | 472    | 1,360              | 0                           | 0     | 0                  | 0                        | 0     | 0                  |
| New Mexico                      | 15,913               | 5,870  | 10,043             | 15,913               | 5,870  | 10,043             | 0                           | 0     | 0                  | 0                        | 0     | 0                  |
| Utah                            | 6,050                | 3,048  | 3,002              | 5,742                | 2,893  | 2,849              | 0                           | 0     | 0                  | 308                      | 155   | 153                |
| Total                           | 165,457              | 67,325 | 98,132             | 159,877              | 63,661 | 96,216             | 2,118                       | 2,118 | 0                  | 3,462                    | 1,546 | 1,916              |

<sup>1/</sup>Unused plant residues at primary manufacturing plants; i.e., do not include primary plant waste that is subsequently used for fuel or fiber (pulp or particle board).

<sup>2/</sup>Unused material suitable for chipping, such as slabs, edgings, veneer cores, and trimmings.

<sup>3/</sup>Unused material such as sawdust and shavings.

Table 31. — Output of plant byproducts in the Rocky Mountain States by industrial source, type of material, and State, 1966

| State           | All industries <sup>1/</sup>    |                     |            |          |                     | Lumber industry |                     |            |          |                     | Veneer and plywood industry |                     |            |          |                     |
|-----------------|---------------------------------|---------------------|------------|----------|---------------------|-----------------|---------------------|------------|----------|---------------------|-----------------------------|---------------------|------------|----------|---------------------|
|                 | Total                           | Fiber <sup>2/</sup> | Industrial | Domestic | Other <sup>3/</sup> | Total           | Fiber <sup>2/</sup> | Industrial | Domestic | Other <sup>3/</sup> | Total                       | Fiber <sup>2/</sup> | Industrial | Domestic | Other <sup>3/</sup> |
|                 |                                 | fuel                | fuel       | fuel     | fuel                |                 | fuel                | fuel       | fuel     | fuel                |                             | fuel                | fuel       | fuel     | fuel                |
|                 | ----- Thousand cubic feet ----- |                     |            |          |                     |                 |                     |            |          |                     |                             |                     |            |          |                     |
| Idaho           | 92,167                          | 53,281              | 28,501     | 512      | 9,873               | 79,002          | 42,333              | 28,361     | 496      | 7,812               | 13,165                      | 10,948              | 140        | 16       | 2,061               |
| Montana         | 73,494                          | 42,212              | 26,622     | 997      | 3,663               | 64,705          | 34,012              | 26,394     | 696      | 3,603               | 8,789                       | 8,200               | 228        | 301      | 60                  |
| W. South Dakota | 1,533                           | 811                 | 558        | 48       | 116                 | 1,533           | 811                 | 558        | 48       | 116                 | 0                           | 0                   | 0          | 0        | 0                   |
| Wyoming         | 3,313                           | 2,928               | 165        | 137      | 83                  | 3,313           | 2,928               | 165        | 137      | 83                  | 0                           | 0                   | 0          | 0        | 0                   |
| Arizona         | 19,309                          | 10,863              | 8,261      | 36       | 149                 | 19,309          | 10,863              | 8,261      | 36       | 149                 | 0                           | 0                   | 0          | 0        | 0                   |
| Colorado        | 2,499                           | 231                 | 596        | 194      | 1,478               | 2,143           | 231                 | 596        | 194      | 1,122               | 356                         | 0                   | 0          | 0        | 356                 |
| Nevada          | 1,772                           | 788                 | 984        | 0        | 0                   | 1,772           | 788                 | 984        | 0        | 0                   | 0                           | 0                   | 0          | 0        | 0                   |
| New Mexico      | 6,120                           | 4,501               | 1,314      | 68       | 237                 | 6,120           | 4,501               | 1,314      | 68       | 237                 | 0                           | 0                   | 0          | 0        | 0                   |
| Utah            | 535                             | 0                   | 12         | 54       | 469                 | 535             | 0                   | 12         | 54       | 469                 | 0                           | 0                   | 0          | 0        | 0                   |
| Total           | 200,742                         | 115,615             | 67,013     | 2,046    | 16,068              | 178,432         | 96,467              | 66,645     | 1,729    | 13,591              | 22,310                      | 19,148              | 368        | 317      | 2,477               |

<sup>1/</sup>The lumber, veneer, and plywood industries are the only ones with significant plant byproducts.

<sup>2/</sup>Mainly chips and sawdust used for pulpwood.

<sup>3/</sup>Includes livestock bedding, mulch, and small dimension and speciality items.

Table 32. — Removals from growing stock in the Rocky Mountain States by roundwood products, logging residues, and other means, by State, 1966

| State                           | Total<br>removals | Products        |          |                |          |                     |                 |                                      |  |  |        | Logging<br>residues | Other<br>removals |
|---------------------------------|-------------------|-----------------|----------|----------------|----------|---------------------|-----------------|--------------------------------------|--|--|--------|---------------------|-------------------|
|                                 |                   | All<br>products | Saw logs | Veneer<br>logs | Pulpwood | Commercial<br>poles | Mine<br>timbers | Miscellaneous<br>industrial<br>wood/ | Posts, fuelwood<br>miscellaneous<br>farm timbers |  |        |                     |                   |
| ----- Thousand cubic feet ----- |                   |                 |          |                |          |                     |                 |                                      |  |  |        |                     |                   |
| Idaho                           | 338,508           | 301,930         | 249,414  | 39,236         | 7,536    | 3,571               | 142             | 595                                  | 1,436  |  | 36,034 |                     | 544               |
| Montana                         | 270,555           | 233,369         | 193,647  | 27,884         | 3,148    | 2/ 3,472            | 2,974           | 248                                  | 2,996  |  | 36,860 |                     | 326               |
| W. South Dakota                 | 15,775            | 14,923          | 6,912    | 0              | 4,645    | --                  | 1               | --                                   | 3/ 3,365   |  | 767    |                     | 89                |
| Wyoming                         | 35,980            | 32,596          | 26,524   | 0              | 112      | 2/ 3,616            | 478             | 27                                   | 1,839  |  | 2,715  |                     | 669               |
| Arizona                         | 81,198            | 71,032          | 61,813   | 0              | 6,647    | 337                 | --              | 73                                   | 2,145  |  | 7,509  |                     | 2,657             |
| Colorado                        | 56,404            | 49,432          | 38,942   | 5,005          | 201      | 837                 | 2,574           | 593                                  | 1,280  |  | 4,346  |                     | 2,626             |
| Nevada                          | 76                | 76              | 2        | 0              | 0        | 0                   | --              | --                                   | 74   |  | (4/)   |                     | (4/)              |
| New Mexico                      | 49,320            | 42,849          | 41,505   | 0              | --       | 0                   | 236             | --                                   | 1,108  |  | 5,122  |                     | 1,349             |
| Utah                            | 15,484            | 13,146          | 11,644   | 0              | 0        | --                  | 442             | 706                                  | 3/ 341   |  | 1,486  |                     | 85                |
| Total                           | 863,300           | 759,353         | 630,403  | 72,125         | 22,289   | 10,848              | 6,882           | 2,242                                | 14,584   |  | 94,839 |                     | 9,108             |

1/ Includes house logs, converter poles, shingle bolts, excelsior bolts, match stock, charcoal wood, and similar items.

2/ Includes a small amount of piling.

3/ Includes a small volume of commercial poles to avoid disclosure of individual operations.

4/ Less than 0.5 MCF.

Table 33. — Removals from sawtimber in the Rocky Mountain States by roundwood products, logging residues, and other means, by State, 1966

| State  | Total<br>removals | Products        |           |                |          |                     |                 |                                      |  |         |        | Logging<br>residues | Other<br>removals |
|--|-------------------|-----------------|-----------|----------------|----------|---------------------|-----------------|--------------------------------------|--|---------|--------|---------------------|-------------------|
|  |                   | All<br>products | Saw logs  | Veneer<br>logs | Pulpwood | Commercial<br>poles | Mine<br>timbers | Miscellaneous<br>industrial<br>wood/ | Posts, fuelwood<br>miscellaneous<br>farm timbers |         |        |                     |                   |
| ----- Thousand board feet, International 1/4-inch log rule ----- |                   |                 |           |                |          |                     |                 |                                      |  |         |        |                     |                   |
| Idaho  | 1,974,434         | 1,859,405       | 1,532,400 | 251,110        | 45,337   | 22,169              | 909             | 2,900                                | 4,580  | 111,682 | 3,347  |                     |                   |
| Montana  | 1,571,247         | 1,452,535       | 1,214,554 | 178,458        | 15,916   | 2/15,663            | 19,034          | 1,407                                | 7,503  | 116,679 | 2,033  |                     |                   |
| W. South Dakota  | 94,772            | 92,094          | 43,794    | 0              | 28,242   | --                  | 6               | --                                   | 3/20,052   | 2,162   | 516    |                     |                   |
| Wyoming  | 207,311           | 195,920         | 161,266   | 0              | 387      | 2/22,911            | 3,059           | 164                                  | 8,133  | 7,374   | 4,017  |                     |                   |
| Arizona  | 483,775           | 443,436         | 391,647   | 0              | 42,115   | 2,104               | 141             | 418                                  | 7,011  | 23,755  | 16,584 |                     |                   |
| Colorado   | 339,114           | 310,425         | 244,244   | 32,930         | 1,274    | 5,250               | 16,474          | 3,776                                | 6,477  | 12,204  | 16,485 |                     |                   |
| Nevada   | 34                | 33              | 11        | 0              | 0        | 0                   | --              | --                                   | 22   | 1       | (1/2)  |                     |                   |
| New Mexico   | 289,866           | 265,592         | 257,663   | 0              | --       | 0                   | 1,510           | --                                   | 6,419  | 15,908  | 8,366  |                     |                   |
| Utah   | 84,632            | 75,319          | 70,796    | 0              | 0        | --                  | 2,912           | 1,417                                | 3/194  | 4,433   | 4,880  |                     |                   |
| Total  | 5,045,185         | 4,694,759       | 3,916,375 | 462,498        | 133,271  | 68,097              | 44,045          | 10,082                               | 60,391   | 294,198 | 56,228 |                     |                   |

<sup>1</sup>/ Includes house logs, converter poles, shingle bolts, excelsior bolts, match stock, charcoal wood, and similar items.

<sup>2</sup>/ Includes a small amount of piling.

<sup>3</sup>/ Includes a small volume of commercial poles to avoid disclosure of individual operations.

<sup>4</sup>/ Less than 0.5 MBF.



Table 34. — Log imports to sawmills and plywood plants<sup>1</sup> in the Rocky Mountain States, by State, 1966

| Receiving State       | State of origin                             | Volume                                 |
|-----------------------|---|--|
|                       |   | --Thousand board feet <sup>2/</sup> -- |
| Idaho                 | Montana<br>Washington<br>Wyoming            | 40,035<br>29,208<br>123                |
| Montana               | Idaho<br>Wyoming                            | 109,336<br>67                          |
| W. South Dakota       | Wyoming                                     | 9,968                                  |
| Wyoming               | Idaho<br>Montana<br>W. South Dakota<br>Utah | 2,980<br>1,469<br>10,248<br>1,512      |
| Arizona <sup>3/</sup> | 0   | 0                                      |
| Colorado              | New Mexico<br>Wyoming                       | 14,442<br>8,024                        |
| Nevada                | California                                  | 44,434                                 |
| New Mexico            | Arizona                                     | 4,554                                  |
| Utah                  | Nevada                                      | 11                                     |
| Washington            | Idaho                                       | 2,800                                  |

<sup>1/</sup> Idaho and Montana are the only states reported as importing veneer logs.

<sup>2/</sup> International 1/4-inch log rule.

<sup>3/</sup> No log imports were reported in Arizona.

# IDAHO

Table 35. — Mill receipts of saw logs from Idaho timberlands by species and county of origin, 1966

| County                      | Species  |   |                   |                               |  |         |         |          |         |       |            | All species |         |
|-----------------------------|--|---|-------------------|-------------------------------|--|---------|---------|----------|---------|-------|------------|-------------|---------|
|                             | True <sup>1</sup> : Western : Engelmann : Lodgepole : Western <sup>2</sup> : Ponderosa : Douglas : Western : Western : Cottonwood : Volume : Percent | firs <sup>3</sup> : larch : spruce : pine | white pine : pine | fir : redcedar : hemlock : 3/ | Thousand board feet, International 1/4-inch log rule | pine    | fir     | redcedar | hemlock | Aspen | Cottonwood | Volume      | Percent |
| Adams                       | 10,289   | 781                                       | 3,748             | 869                           | --   | 43,315  | 22,634  | --       | --      | --    | --         | 81,636      | 4.9     |
| Bear Lake, Franklin, Oneida | 115  | --  | 230               | 40                            | --   | --      | 389     | --       | --      | 144   | 28         | 946         | .1      |
| Beneviah                    | 14,030   | 6,979                                     | 785               | 328                           | 5,628  | 1,062   | 9,421   | 1,622    | 319     | --    | --         | 40,174      | 2.4     |
| Blaine                      | 94   | --  | 63                | 56                            | --   | --      | 4,569   | --       | --      | --    | 29         | 4,811       | .3      |
| Boise                       | 3,203  | --  | 134               | 127                           | --   | --      | 85,428  | 22,865   | --      | --    | --         | 111,757     | 6.7     |
| Bonner                      | 17,239   | 12,587                                    | 5,598             | 394                           | 22,211   | 3,009   | 18,368  | 4,679    | 8,312   | --    | 29         | 92,426      | 5.5     |
| Boundary                    | 8,771  | 7,499                                     | 12,394            | 198                           | 9,835  | 713     | 6,890   | 9,169    | 3,333   | --    | --         | 58,802      | 3.5     |
| Camas                       | 81   | --  | 41                | 41                            | --   | --      | 4,462   | --       | --      | --    | --         | 4,625       | .3      |
| Caribou                     | 104  | --  | --                | 196                           | --   | --      | 1,621   | --       | --      | --    | --         | 1,921       | .1      |
| Cassia, Power, Twin Falls   | 251  | --  | 96                | 130                           | --   | --      | 9,311   | --       | --      | --    | --         | 9,788       | .6      |
| Clearwater                  | 109,871  | 33,906                                    | 12,328            | 211                           | 177,402  | 25,520  | 77,601  | 52,832   | 4,461   | --    | --         | 494,132     | 29.7    |
| Custer                      | 3  | --  | 151               | 55                            | --   | --      | 5,144   | --       | --      | --    | --         | 5,353       | .3      |
| Elmore                      | 113  | --  | 31                | 26                            | --   | --      | 17,105  | 6,894    | --      | --    | --         | 24,169      | 1.5     |
| Fremont                     | --   | --  | --                | 18,258                        | --   | 45      | 3,383   | --       | --      | --    | 23         | 21,709      | 1.3     |
| Gem                         | 450  | --  | 16                | 8                             | --   | 369     | 156     | --       | --      | --    | --         | 999         | .1      |
| Idaho                       | 54,024   | 18,848                                    | 21,058            | 3,762                         | 6,690  | 39,260  | 52,075  | 9,857    | --      | --    | --         | 205,574     | 12.3    |
| Kootenai                    | 29,249   | 16,296                                    | 861               | 172                           | 15,724   | 7,821   | 19,279  | 2,270    | 6,898   | --    | --         | 98,570      | 5.9     |
| Latah                       | 9,908  | 2,751                                     | 26                | 24                            | 4,383  | 2,961   | 7,213   | 2,248    | 11      | --    | --         | 29,525      | 1.8     |
| Lemhi                       | --   | --  | 1,467             | --                            | --   | 15,133  | 20,112  | --       | --      | --    | --         | 36,712      | 2.2     |
| Lewis                       | 841  | --  | --                | --                            | --   | 3,883   | 1,188   | --       | --      | --    | --         | 5,912       | .3      |
| Madison                     | --   | --  | --                | 6,123                         | --   | --      | --      | --       | --      | --    | --         | 6,123       | .4      |
| Nez Perce                   | 460  | --  | --                | --                            | --   | 146     | 579     | --       | --      | --    | --         | 1,185       | .1      |
| Shoshone                    | 60,187   | 25,850                                    | 8,669             | 1,817                         | 58,094   | 3,814   | 39,319  | 12,272   | 11,817  | --    | --         | 221,839     | 13.3    |
| Teton                       | --   | --  | --                | 3,067                         | 11   | --      | 33      | --       | --      | --    | --         | 3,111       | .2      |
| Valley                      | 14,257   | 668                                       | 13,563            | 1,473                         | --   | 30,273  | 25,336  | --       | --      | --    | --         | 85,570      | 5.1     |
| Washington                  | 2,101  | 134                                       | 257               | 63                            | --   | 7,884   | 7,612   | --       | --      | --    | --         | 18,056      | 1.1     |
| Total                       | 335,641  | 126,299                                   | 81,516            | 37,443                        | 299,978  | 287,741 | 366,454 | 94,949   | 35,151  | 144   | 109        | 1,665,425   | 100.0   |
| Percent of total            | 20.2   | 7.6                                       | 4.9               | 2.2                           | 18.0   | 17.3    | 22.0    | 5.7      | 2.1     | (4/)  | (4/)       | 100.0       |         |

<sup>1</sup>/ Includes grand, white, and subalpine firs.

<sup>2</sup>/ Includes limber and whitebark pines.

<sup>3</sup>/ Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

<sup>4</sup>/ Less than 0.05 percent.



Table 37. — Mill receipts of round pulpwood from Idaho timberlands by species and county of origin, 1966

| County              | Species                  |                  |                     |                   |                          |                   |                 |                    |            |         | All species |         |
|---------------------|--------------------------|------------------|---------------------|-------------------|--------------------------|-------------------|-----------------|--------------------|------------|---------|-------------|---------|
|                     | True<br>fir <sup>1</sup> | Western<br>larch | Engelmann<br>spruce | Lodgepole<br>pine | Western<br>white<br>pine | Ponderosa<br>pine | Douglas-<br>fir | Western<br>hemlock | Cottonwood | Cords   | Percent     | Percent |
| Standard cords      |                          |                  |                     |                   |                          |                   |                 |                    |            |         |             |         |
| Benewah             | 3,364                    | --               | 4                   | 366               | --                       | --                | --              | 1,749              | 328        | 5,811   | 5.4         |         |
| Blaine              | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Bonner              | 589                      | --               | 6,422               | 8,424             | --                       | --                | --              | 20,275             | 525        | 36,235  | 34.0        |         |
| Boundary            | 71                       | --               | 771                 | 21                | --                       | --                | --              | 2,146              | 14         | 3,023   | 2.8         |         |
| Clark               | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Clearwater          | 8,944                    | 2,327            | 1,132               | --                | 21,387                   | 4,295             | 6,977           | --                 | --         | 45,062  | 42.3        |         |
| Custer              | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Fremont             | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Idaho               | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Kootenai            | 176                      | --               | 1,380               | 7,217             | --                       | --                | --              | 5,045              | 696        | 14,514  | 13.6        |         |
| Latah               | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Lewis               | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Nez Perce           | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Shoshone            | 618                      | --               | --                  | 1,028             | --                       | --                | --              | 361                | --         | 2,007   | 1.9         |         |
| Teton               | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Twin Falls          | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Valley              | --                       | --               | --                  | --                | --                       | --                | --              | --                 | --         | --      | --          |         |
| Total               | 13,762                   | 2,327            | 9,709               | 17,056            | 21,387                   | 4,295             | 6,977           | 29,576             | 1,563      | 106,652 | 100.0       |         |
| Percent of<br>total | 12.9                     | 2.2              | 9.1                 | 16.0              | 20.1                     | 4.0               | 6.5             | 27.7               | 1.5        | 100.0   |             |         |

<sup>1</sup>/ Includes grand, white, and subalpine firs.



Table 38. — Output of roundwood products from Idaho timberlands by species and product, 1966

| Product  | Species                      |                    |                       |                     |   |                     |                   |                       |                                  |                               | All species |         |
|--|------------------------------|--------------------|-----------------------|---------------------|---|---------------------|-------------------|-----------------------|----------------------------------|-------------------------------|-------------|---------|
|  | True<br>: firs <sup>1/</sup> | Western<br>: larch | Engelmann<br>: spruce | Lodgepole<br>: pine | Western <sup>2/</sup><br>: whitepin <sup>3/</sup> | Ponderosa<br>: pine | Douglas-<br>: fir | Western<br>: redcedar | Other<br>: species <sup>4/</sup> | 3/<br>: species <sup>5/</sup> | Volume      | Percent |
|  | — Thousand cubic feet —      |                    |                       |                     |   |                     |                   |                       |                                  |                               |             |         |
| Saw logs                                       | 50,360                       | 19,703             | 12,716                | 5,841               | 46,797  | 44,887              | 17,167            | 14,812                | 5,523                            | 259,806                       | 82.2        |         |
| Veneer logs                                    | 8,340                        | 6,466              | 2,510                 | 0                   | 13,342  | 704                 | 7,434             | 264                   | 176                              | 39,236                        | 12.4        |         |
| Pulpwood                                       | 1,184                        | 200                | 835                   | 1,467               | 1,839   | 369                 | 600               | 0                     | 2,678                            | 9,172                         | 2.9         |         |
| Commercial poles                               | 0                            | 74                 | 0                     | 484                 | 0   | 0                   | 0                 | 3,013                 | 0                                | 3,571                         | 1.1         |         |
| Mine timbers                                   | --                           | 29                 | --                    | 38                  | --  | (47)                | 75                | --                    | --                               | 147                           | .1          |         |
| Miscellaneous industrial wood <sup>2/</sup>    | 0                            | 1                  | 0                     | 23                  | 0   | 0                   | 0                 | 727                   | 0                                | 751                           | .2          |         |
| Posts, fuelwood, miscellaneous<br>farm timbers | 13                           | 137                | --                    | 2,111               | --  | 50                  | 678               | 438                   | 81                               | 3,510                         | 1.1         |         |
| Total  | 61,897                       | 26,610             | 16,061                | 9,064               | 61,978  | 46,012              | 68,954            | 19,254                | 8,458                            | 316,188                       | 100.0       |         |
| Percent of total                               | 19.6                         | 8.4                | 5.1                   | 3.1                 | 19.6  | 14.5                | 21.9              | 6.1                   | 2.7                              | 100.0                         |             |         |

<sup>1/</sup> Includes white, grand, and subalpine firs.

<sup>2/</sup> Includes a small amount of limber and whitebark pines.

<sup>3/</sup> Includes western hemlock, juniper, aspen, and cottonwood.

<sup>4/</sup> Less than 0.5 MCF.

<sup>5/</sup> Includes house logs, shingle logs, picket stock, rails, collar poles, and similar products.

Table 39. — Output of roundwood products from Idaho timberlands by land ownership class and product, 1966

| Product  | Total<br>volume | Land ownership classes |                 |                                  |                  |                   |
|--|-----------------|------------------------|-----------------|----------------------------------|------------------|-------------------|
|  |                 | National<br>Forest     | Other<br>public | Forest<br>industry <sup>1/</sup> | Other<br>private | All<br>ownerships |
|  |                 | —                      | —               | —                                | —                | —                 |
|  | MCF             |                        |                 | Percent                          |                  |                   |
| Saw logs                                       | 259,806         | 48.7                   | 10.3            | 14.5                             | 8.7              | 82.2              |
| Veneer logs                                    | 39,236          | 4.1                    | .8              | 5.6                              | 1.9              | 12.4              |
| Pulpwood                                       | 9,172           | .7                     | .2              | 1.5                              | .5               | 2.9               |
| Commercial poles                               | 3,571           | .3                     | .1              | .5                               | .2               | 1.1               |
| Mine timbers                                   | 142             | .1                     | (2/)            | (2/)                             | (2/)             | .1                |
| Miscellaneous industrial wood <sup>3/</sup>    | 751             | .1                     | (2/)            | .1                               | (2/)             | .2                |
| Posts, fuelwood, miscellaneous<br>farm timbers | 3,510           | .8                     | .1              | .1                               | .1               | 1.1               |
| Total  | 316,188         | 54.8                   | 11.5            | 22.3                             | 11.4             | 100.0             |

<sup>1/</sup> Lands owned by companies or individuals operating wood-using plants.

<sup>2/</sup> Less than 0.05 percent.

<sup>3/</sup> Includes house logs, shingle bolts, picket stock, rails, cellar poles, and similar items.

# MONTANA

Table 40. — Mill receipts of saw logs from Montana timberlands by species and county of origin, 1966

| County                  | Species  |                      |                         |                       |   |                       |                     |                         |                        |              | All species |           |
|-------------------------|--|----------------------|-------------------------|-----------------------|---|-----------------------|---------------------|-------------------------|------------------------|--------------|-------------|-----------|
|                         | : True:<br>: firs <sup>1/</sup>                                    | : Western<br>: larch | : Engelmann<br>: spruce | : Lodgepole<br>: pine | : Western<br>: white pine <sup>2/</sup> | : Ponderosa<br>: pine | : Douglas-<br>: fir | : Western<br>: redcedar | : Western<br>: hemlock | : Cottonwood | : Volume    | : Percent |
|                         | Thousand board feet, International 1/4-inch log rule <sup>3/</sup> |                      |                         |                       |   |                       |                     |                         |                        |              |             |           |
| Beaverhead              | 629  | --                   | 3,659                   | 23,815                | --                                      | 371                   | 8,755               |                         |                        |              | 37,229      | 3.0       |
| Big Horn, Powder River, |  |                      |                         |                       |   |                       |                     |                         |                        |              | 841         | .1        |
| Rosebud                 | --   | --                   | --                      | --                    | --                                      | 841                   | --                  |                         |                        |              | 4,138       | .4        |
| Broadwater              | --   | --                   | --                      | 1,824                 | --                                      | --                    | 2,614               |                         |                        |              | 580         | (4/)      |
| Carbon                  | --   | --                   | --                      | --                    | --                                      | --                    | 580                 |                         |                        |              | 597         | (4/)      |
| Choteau, Judith Basin   | --   | --                   | 58                      | --                    | --                                      | --                    | 539                 |                         |                        |              | 3,479       | .3        |
| Deer Lodge              | --   | --                   | --                      | 3,479                 | --                                      | --                    | --                  |                         |                        |              | 7,009       | .6        |
| Fergus                  | --   | --                   | --                      | 1,722                 | --                                      | 365                   | 4,922               |                         |                        |              | 166,507     | 13.3      |
| Flathead                | 3,155  | 30,052               | 46,849                  | 10,155                | 4,967                                   | 13,653                | 57,057              | 139                     | 214                    | 266          | 50,445      | 4.1       |
| Gallatin                | 33   | --                   | 2,205                   | 26,666                | --                                      | --                    | 21,541              |                         |                        |              | 5,745       | .5        |
| Glacier                 | 355  | --                   | 3,820                   | 1,498                 | --                                      | --                    | 72                  |                         |                        |              | 27,919      | 2.2       |
| Granite                 | 664  | 488                  | 1,043                   | 11,245                | 579                                     | 585                   | 13,315              |                         |                        |              | 324         | (4/)      |
| Jefferson, Madison      | --   | --                   | --                      | 1                     | --                                      | --                    | 323                 |                         |                        |              | 93,463      | 7.5       |
| Lake                    | 4,760  | 14,672               | 17,772                  | 1,968                 | 2,721                                   | 21,547                | 29,868              | 155                     |                        |              | 23,178      | 1.8       |
| Lewis & Clark           | 51   | --                   | 679                     | 1,787                 | --                                      | 2,349                 | 18,312              |                         |                        |              | 307,604     | 24.5      |
| Lincoln                 | 14,938   | 93,338               | 33,303                  | 23,165                | 16,397                                  | 48,727                | 65,278              | 8,496                   | 3,903                  | 59           | 27,089      | 2.2       |
| Meagher                 | --   | --                   | --                      | 7,654                 | --                                      | --                    | 19,435              |                         |                        |              | 53,632      | 4.3       |
| Mineral                 | 1,464  | 9,565                | 4,861                   | 2,055                 | 3,145                                   | 20,832                | 11,462              | 62                      | 186                    |              | 149,149     | 11.9      |
| Missoula                | 1,434  | 31,757               | 11,800                  | 9,113                 | 52                                      | 36,293                | 58,700              |                         |                        |              | 525         | (4/)      |
| Musselshell             | --   | --                   | --                      | --                    | --                                      | 525                   | --                  |                         |                        |              | 24,316      | 1.9       |
| Park                    | --   | --                   | 615                     | 14,957                | --                                      | --                    | 8,744               |                         |                        |              | 35,149      | 2.8       |
| Powell                  | 2,088  | 2,007                | --                      | 3,649                 | 232                                     | 5,631                 | 21,542              |                         |                        |              | 80,417      | 6.4       |
| Havalli                 | 1,160  | --                   | 3,330                   | 1,400                 | --                                      | 29,223                | 45,304              |                         |                        |              | 153,382     | 12.2      |
| Sanders                 | 5,264  | 27,986               | 10,447                  | 8,815                 | 7,026                                   | 48,672                | 43,333              | 473                     | 1,366                  |              | 851         | .1        |
| Sweet Grass             | --   | --                   | --                      | --                    | --                                      | 189                   | 662                 |                         |                        |              |             |           |
| Total                   | 35,995   | 209,865              | 140,441                 | 154,968               | 35,119                                  | 229,803               | 432,358             | 9,325                   | 5,669                  | 325          | 1,253,868   | 100.0     |
| Percent of total        | 2.9  | 16.7                 | 11.2                    | 12.4                  | 2.8                                     | 18.3                  | 34.5                | .7                      | .5                     | (4/)         | 100.0       |           |

<sup>1/</sup> Includes grand, white, and subalpine firs.

<sup>2/</sup> Includes limber and whitebark pines.

<sup>3/</sup> Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

<sup>4/</sup> Less than 0.05 percent.

Table 41. — *Mill receipts of veneer logs from Montana timberlands by species and county of origin, 1966*

| County   | Species             |           |             |             |               |             |            |                           |              |          | All species |  |
|--|---------------------|-----------|-------------|-------------|---------------|-------------|------------|---------------------------|--------------|----------|-------------|--|
|  | : True              | : Western | : Engelmann | : Lodgepole | : Western     | : Ponderosa | : Douglas- | : Western                 | : Cottonwood | : Volume | : Percent   |  |
|  | : fir <sup>1/</sup> | : larch   | : spruce    | : pine      | : white pine: | : pine      | : fir      | : redbcedar <sup>2/</sup> | :            | :        | :           |  |
| ----- Thousand board feet, International 1/4-inch log rule <sup>3/</sup> ----- |                     |           |             |             |               |             |            |                           |              |          |             |  |
| Flathead   | 979                 | 16,850    | 13,604      | 941         | 902           | 10          | 28,969     | --                        | 119          | 62,374   | 34.0        |  |
| Lake   | 11                  | 3,266     | 2,035       | 29          | --            | --          | 6,255      | --                        | 85           | 11,681   | 6.4         |  |
| Lincoln  | 147                 | 23,867    | 1,653       | 68          | --            | 65          | 9,244      | 1                         | 113          | 35,158   | 19.2        |  |
| Mineral  | --                  | 2,000     | --          | --          | --            | --          | 1,750      | --                        | --           | 3,750    | 2.0         |  |
| Missoula   | 20                  | 23,379    | 8,344       | 12          | --            | --          | 21,952     | 32                        | 454          | 54,193   | 29.5        |  |
| Sanders  | 122                 | 5,652     | 1,843       | 49          | 2             | 119         | 7,823      | 309                       | 374          | 16,293   | 8.9         |  |
| Total  | 1,279               | 75,014    | 27,479      | 1,099       | 904           | 194         | 75,993     | 342                       | 1,145        | 183,449  | 100.0       |  |
| Percent of total   | .7                  | 40.9      | 15.0        | .6          | .5            | .1          | 41.4       | .2                        | .6           | 100.0    |             |  |

<sup>1/</sup>Includes grand, white, and subalpine firs.

<sup>2/</sup>Includes a small amount of western hemlock.

<sup>3/</sup>Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

Table 42. — Mill receipts of round pulpwood from Montana timberlands by species and county of origin, 1966

| County           | Species                      |                      |                    |                     |           | All species |           |
|------------------|------------------------------|----------------------|--------------------|---------------------|-----------|-------------|-----------|
|                  | : True <sub>1</sub> / : firs | : Engelmann : spruce | : Lodgepole : pine | : Western : hemlock | : Cords   | : Percent   |           |
|                  | - - - - -                    | - - - - -            | - - - - -          | - - - - -           | - - - - - | - - - - -   | - - - - - |
|                  |                              |                      | Standard cords     |                     |           |             |           |
| Gallatin         | 428                          | 1,149                | 35,715             | --                  | 37,292    | 85.4        |           |
| Lincoln          | --                           | --                   | 3,033              | 3,320               | 6,353     | 14.6        |           |
| Total            | 428                          | 1,149                | 38,748             | 3,320               | 43,645    | 100.0       |           |
| Percent of total | 1.0                          | 2.6                  | 88.8               | 7.6                 | 100.0     |             |           |

<sub>1</sub>/ Includes grand, white, and subalpine firs.



Table 43. — Output of roundwood products from Montana timberlands by species and product, 1966

| Product                                     | Species   |         |          |        |               |        |        |            |             |          |           |
|---|---|---------|----------|--------|---------------|--------|--------|------------|-------------|----------|-----------|
|   | : True : Western : Engelmann : Lodgepole:Western/ : Ponderosa : Douglas- : Western : Other 3/ : All species |         |          |        |               |        |        |            |             |          |           |
|   | : fir1/   | : larch | : spruce | : pine | : white pine: | : pine | : fir  | : redcedar | : species2/ | : Volume | : Percent |
|   | ----- Thousand cubic feet -----   |         |          |        |               |        |        |            |             |          |           |
| Saw logs                                    | 5,615   | 32,739  | 21,909   | 24,175 | 5,478         | 35,849 | 67,448 | 1,455      | 935         | 195,603  | 82.1      |
| Veneer logs                                 | 195   | 11,402  | 4,177    | 167    | 137           | 29     | 11,551 | 52         | 174         | 27,884   | 11.7      |
| Pulpwood                                    | 37  | --      | 99       | 3,332  | --            | --     | --     | 0          | 285         | 3,753    | 1.6       |
| Commercial poles <sup>4/</sup>              | 0   | 0       | 0        | 2,046  | 0             | 73     | 0      | 353        | 0           | 2,472    | 1.0       |
| Mine timbers                                | 18  | 1,463   | --       | 9      | --            | 4      | 1,480  | --         | --          | 2,974    | 1.3       |
| Miscellaneous industrial wood <sup>5/</sup> | 0   | 0       | 0        | 42     | 187           | 27     | 0      | 0          | 0           | 256      | .1        |
| Posts, fuelwood, miscellaneous farm timbers | --  | 228     | 14       | 2,616  | --            | 159    | 252    | 60         | 1,960       | 5,289    | 2.2       |
| Total                                       | 5,865   | 45,832  | 26,199   | 32,387 | 5,802         | 36,141 | 80,731 | 1,920      | 3,354       | 238,231  | 100.0     |
| Percent of total                            | 2.5   | 19.2    | 11.0     | 13.6   | 2.4           | 15.2   | 33.9   | .8         | 1.4         | 100.0    |           |

<sup>1/</sup> Includes grand, white, and subalpine firs.

<sup>2/</sup> Includes a small amount of limber and whitebark pines.

<sup>3/</sup> Includes western hemlock, juniper, pinyon pine, and cottonwood.

<sup>4/</sup> Includes a small volume of piling.

<sup>5/</sup> Includes house logs, converter poles, and similar items.

Table 44. — Output of roundwood products from Montana timberlands by land ownership class and product, 1966

| Product  | Total<br>volume | Land ownership classes |                 |                                  |                  |                   |
|--|-----------------|------------------------|-----------------|----------------------------------|------------------|-------------------|
|  |                 | National<br>Forest     | Other<br>public | Forest<br>industry <sup>1/</sup> | Other<br>private | All<br>ownerships |
|  |                 | -                      | -               | -                                | -                | -                 |
|  | MCF             | -                      | -               | -                                | -                | -                 |
| Saw logs                                       | 195,603         | 48.4                   | 9.0             | 13.6                             | 11.1             | 82.1              |
| Veneer logs                                    | 27,884          | 7.9                    | .2              | 1.4                              | 2.2              | 11.7              |
| Pulpwood                                       | 3,753           | 1.6                    | --              | --                               | (2/)             | 1.6               |
| Commercial poles <sup>3/</sup>                 | 2,472           | .7                     | (2/)            | .1                               | .3               | 1.0               |
| Mine timbers                                   | 2,974           | (2/)                   | --              | 1.3                              | (2/)             | 1.3               |
| Miscellaneous industrial wood <sup>4/</sup>    | 256             | (2/)                   | 0               | (2/)                             | .1               | .1                |
| Posts, fuelwood, miscellaneous<br>farm timbers |                 | .8                     | (2/)            | .1                               | 1.3              | 2.2               |
|  | 5,289           |                        |                 |                                  |                  |                   |
| Total  | 238,231         | 59.4                   | 9.2             | 16.5                             | 14.9             | 100.0             |

<sup>1/</sup> Lands owned by companies or individuals operating wood-using plants.

<sup>2/</sup> Less than 0.05 percent.

<sup>3/</sup> Includes a small amount of piling.

<sup>4/</sup> Includes house logs, converter poles, and similar items.

# WESTERN SOUTH DAKOTA

Table 45. — Mill receipts of saw logs from western South Dakota timberlands by species and county of origin, 1966

| County     | Species                                 |                    | All species |           |
|------------|---|--------------------|-------------|-----------|
|            | : White : spruce                        | : Ponderosa : pine | : Volume :  | : Percent |
|            | - - - Thousand board feet <sup>1/</sup> |                    | - - -       |           |
| Custer     | --                                      | 15,015             | 15,015      | 33.9      |
| Lawrence   | 5                                       | 9,213              | 9,218       | 20.8      |
| Meade      | --                                      | 5,258              | 5,258       | 11.9      |
| Pennington | --                                      | 14,817             | 14,817      | 33.4      |
| Total      | 5                                       | 44,303             | 44,308      | 100.0     |

<sup>1/</sup> International 1/4-inch log rule. Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

Table 46. — Output of roundwood products from western South Dakota timberlands by species and product, 1966

| Product   | Species                   |                    | All species |               |
|---|---------------------------|--------------------|-------------|---------------|
|   | : White : spruce          | : Ponderosa : pine | : Volume :  | : Percent     |
|   | - - - Thousand cubic feet |                    | - - -       |               |
| Saw logs  | 1                         | 6,911              | 6,912       | 43.6          |
| Pulpwood  | 411                       | 4,234              | 4,645       | 29.3          |
| Mine timbers  | --                        | 1                  | 1           | ( <u>1/</u> ) |
| Posts, fuelwood, miscellaneous farm timbers <sup>2/</sup> | --                        | 4,301              | 4,301       | 27.1          |
| Total   | 412                       | 15,447             | 15,859      | 100.0         |
| Percent of total  | 2.6                       | 97.4               | 100.0       |               |

<sup>1/</sup> Less than 0.05 percent.

<sup>2/</sup> Includes volume of commercial poles.

Table 47. — Output of roundwood products from western South Dakota timberlands by land ownership class and product, 1966

| Product  | : Total<br>: volume<br>: | Land ownership classes     |                         |                             |                          |                       |
|--|--------------------------|----------------------------|-------------------------|-----------------------------|--------------------------|-----------------------|
|  |                          | : National :<br>: Forest : | : Other :<br>: public : | : Forest 1/<br>: industry : | : Other :<br>: private : | : All<br>: ownerships |
|  | - MCF -                  | - - - - -                  | - - - - -               | - - - - -                   | - - - - -                | - - - - -             |
| Saw logs   | 6,912                    | 36.5                       | 3.3                     | 3.6                         | 0.2                      | 43.6                  |
| Pulpwood   | 4,645                    | 24.6                       | 2.2                     | 2.4                         | .1                       | 29.3                  |
| Mine timbers   | 1                        | --                         | --                      | --                          | (2/)                     | (2/)                  |
| Posts, fuelwood, miscellaneous<br>farm timbers <sup>3/</sup> | 4,301                    | 22.3                       | 1.1                     | .6                          | 3.1                      | 27.1                  |
| Total  | 15,859                   | 83.4                       | 6.6                     | 6.6                         | 3.4                      | 100.0                 |

<sup>1/</sup> Lands owned by companies or individuals operating wood-using plants.

<sup>2/</sup> Less than 0.05 percent.

<sup>3/</sup> Includes volume of commercial poles.

# WYOMING

Table 48. — *Mill receipts of saw logs from Wyoming timberlands by species and county of origin, 1966*

| County           | Species  |                                     |                     |                     |                   | All species |         |
|------------------|--|-------------------------------------|---------------------|---------------------|-------------------|-------------|---------|
|                  | True <sup>1/</sup><br>: firs                                       | Engelmann<br>: spruce <sup>2/</sup> | Lodgepole<br>: pine | Ponderosa<br>: pine | Douglas-<br>: fir | Volume      | Percent |
|                  | Thousand board feet, International 1/4-inch log rule <sup>3/</sup> |                                     |                     |                     |                   |             |         |
| Albany           | 35   | 624                                 | 12,011              | 1,464               | --                | 14,134      | 8.1     |
| Big Horn         | --   | 1,357                               | 4,377               | --                  | --                | 5,734       | 3.3     |
| Carbon           | 460  | 9,069                               | 20,281              | --                  | --                | 29,810      | 17.2    |
| Converse, Weston | --   | --                                  | --                  | 81                  | --                | 81          | (4/)    |
| Crook            | --   | --                                  | --                  | 23,413              | --                | 23,413      | 13.5    |
| Fremont          | 697  | 2,159                               | 23,406              | --                  | 917               | 27,179      | 15.7    |
| Hot Springs      | --   | 967                                 | 968                 | --                  | 691               | 2,626       | 1.5     |
| Johnson          | --   | --                                  | 5,533               | --                  | 399               | 5,932       | 3.4     |
| Lincoln          | 2,582  | 7,771                               | 9,703               | --                  | 3,719             | 23,775      | 13.7    |
| Park             | --   | 269                                 | 54                  | --                  | 200               | 523         | .3      |
| Sheridan         | --   | --                                  | 9,885               | --                  | --                | 9,885       | 5.7     |
| Sublette         | --   | 5,528                               | 2,280               | --                  | --                | 7,808       | 4.5     |
| Teton            | 105  | 1,389                               | 20,367              | --                  | 448               | 22,309      | 12.9    |
| Washakie         | --   | 6                                   | 138                 | 69                  | 69                | 282         | .2      |
| Total            | 3,879  | 29,139                              | 109,003             | 25,027              | 6,443             | 173,491     | 100.0   |
| Percent of total | 2.3  | 16.8                                | 62.8                | 14.4                | 3.7               | 100.0       |         |

<sup>1/</sup> Includes white and subalpine firs.

<sup>2/</sup> Includes white spruce.

<sup>3/</sup> Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

<sup>4/</sup> Less than 0.05 percent.



Table 49. — Output of roundwood products from Wyoming timberlands by species and product, 1966

| Product                                     | Species                |                                |                |                |             | All species                 |         |
|---|------------------------|--------------------------------|----------------|----------------|-------------|-----------------------------|---------|
|   | True fir <sup>1/</sup> | Engelmann spruce <sup>2/</sup> | Lodgepole pine | Ponderosa pine | Douglas-fir | Other species <sup>3/</sup> | Percent |
| ----- Thousand cubic feet -----             |                        |                                |                |                |             |                             |         |
| Saw logs                                    | 605                    | 4,546                          | 17,005         | 3,904          | 1,005       | 27,065                      | 80.7    |
| Pulpwood                                    | --                     | --                             | 141            | --             | --          | 141                         | .4      |
| Commercial poles <sup>4/</sup>              | 0                      | 0                              | 622            | 2,994          | 0           | 3,616                       | 10.8    |
| Mine timbers                                | (5/)                   | 419                            | 57             | 2              | --          | 478                         | 1.4     |
| Miscellaneous industrial wood <sup>6/</sup> | --                     | --                             | 28             | --             | --          | 28                          | .1      |
| Posts, fuelwood, miscellaneous farm timbers | --                     | --                             | 1,889          | 95             | 71          | 2,195                       | 6.6     |
| Total                                       | 605                    | 4,965                          | 19,742         | 6,995          | 1,076       | 33,523                      | 100.0   |
| Percent of total                            | 1.8                    | 14.8                           | 58.9           | 20.9           | 3.2         | 100.0                       |         |

<sup>1/</sup> Includes white and subalpine firs.<sup>4/</sup> Includes a small volume of piling.<sup>2/</sup> Includes white spruce.<sup>5/</sup> Less than 0.5 MCF.<sup>3/</sup> Includes juniper and aspen.<sup>6/</sup> Includes house logs and similar items.

Table 50. — Output of roundwood products from Wyoming timberlands by land ownership class and product, 1966

| Product                                     | Total  |        | Land ownership classes |        |         |           | All |
|---|--------|--------|------------------------|--------|---------|-----------|-----|
|   | volume | Forest | Other                  | Public | Private | Ownership |     |
| ----- MCF ----- Percent -----               |        |        |                        |        |         |           |     |
| Saw logs                                    | 27,065 | 77.7   | 1.6                    | --     | 1.8     | 80.7      |     |
| Pulpwood                                    | 141    | .4     | --                     | --     | --      | .4        |     |
| Commercial poles <sup>2/</sup>              | 3,616  | 6.7    | 1.5                    | 2.6    | --      | 10.8      |     |
| Mine timbers                                | 478    | 1.4    | --                     | --     | --      | 1.4       |     |
| Miscellaneous industrial wood <sup>3/</sup> | 28     | .1     | 0.0                    | 0      | 0       | .1        |     |
| Posts, fuelwood, miscellaneous farm timbers | 2,195  | 6.3    | .1                     | .3     | --      | 6.6       |     |
| Total                                       | 33,523 | 92.6   | 3.4                    | 4.1    | --      | 100.0     |     |

<sup>1/</sup> No receipts were reported from forest industry lands; i.e., lands owned by companies or individuals operating wood-using plants.<sup>2/</sup> Includes a small volume of piling.<sup>3/</sup> Includes house logs and similar items.

# ARIZONA

Table 51. — Output of roundwood products from Arizona timberlands by land ownership class and product, 1966

| Product  | Total<br>: volume | Land ownership classes |        |          |            |          |
|--|-------------------|------------------------|--------|----------|------------|----------|
|  |                   | National               | Other  | Forest   | 1/ : Other | All      |
|  |                   | Forest                 | public | industry | private    | ownships |
|  | - MCF -           | -                      | -      | -        | Percent    | -        |
| Saw logs                                       | 62,437            | 51.1                   | 17.6   | .8       | --         | 69.5     |
| Pulpwood                                       | 6,647             | 6.7                    | .6     | 0        | .1         | 7.4      |
| Commercial poles                               | 335               | .3                     | 0      | .1       | 0          | .4       |
| Mine timbers                                   | 22                | (2/)                   | --     | --       | --         | (2/)     |
| Miscellaneous industrial wood <sup>3/</sup>    | 86                | .1                     | 0      | 0        | (2/)       | .1       |
| Posts, fuelwood, miscellaneous<br>farm timbers |                   | 16.6                   | 5.7    | .3       | --         | 22.6     |
| Total  | 89,873            | 74.8                   | 23.9   | 1.2      | .1         | 100.0    |

1/ Lands owned by companies or individuals operating wood-using plants.

2/ Less than 0.05 percent.

3/ Includes house logs, converter poles, excelsior bolts, and similar items.

Table 52. — Output of roundwood products from Arizona timberlands by species and product, 1966

| Product  | Species                        |                         |                       |                     |                                    | All species |           |
|--|--------------------------------|-------------------------|-----------------------|---------------------|------------------------------------|-------------|-----------|
|  | : True<br>: firs <sup>1/</sup> | : Engelmann<br>: spruce | : Ponderosa<br>: pine | : Douglas-<br>: fir | : Other<br>: species <sup>2/</sup> | : Volume    | : Percent |
|  | - - - - -                      | - - - - -               | - - - - -             | Thousand cubic feet | - - - - -                          | - - - - -   | - - - - - |
| Saw logs                                       | 3,816                          | 693                     | 51,380                | 6,442               | 106                                | 62,437      | 69.5      |
| Pulpwood                                       | --                             | --                      | 6,647                 | --                  | --                                 | 6,647       | 7.4       |
| Commercial poles                               | 0                              | 0                       | 335                   | 0                   | 0                                  | 335         | .4        |
| Mine timbers                                   | --                             | --                      | (3/)                  | --                  | 22                                 | 22          | (4/)      |
| Miscellaneous industrial wood <sup>5/</sup>    | 0                              | 0                       | 8                     | 0                   | 78                                 | 86          | .1        |
| Posts, fuelwood, miscellaneous<br>farm timbers | --                             | --                      | 4,002                 | --                  | 16,344                             | 20,346      | 22.6      |
| Total  | 3,816                          | 693                     | 62,372                | 6,442               | 16,550                             | 89,873      | 100.0     |
| Percent of total                               | 4.2                            | .8                      | 69.4                  | 7.2                 | 18.4                               | 100.0       |           |

<sup>1/</sup> Includes white, subalpine, and corkbark firs.

<sup>2/</sup> Includes juniper, pinyon pine, and aspen.

<sup>3/</sup> Less than 0.5 MCF.

<sup>4/</sup> Less than 0.05 percent.

<sup>5/</sup> Includes house logs, converter poles, excelsior bolts, and similar items.

Table 53. — *Mill receipts of saw logs from Arizona timberlands by species and county of origin, 1966*

| County                | Species                    |                     |                             |                   |                 |       |  |  |  |  | All species |         |
|-----------------------|----------------------------|---------------------|-----------------------------|-------------------|-----------------|-------|--|--|--|--|-------------|---------|
|                       | True <sup>1/</sup><br>firs | Engelmann<br>spruce | White<br>pine <sup>2/</sup> | Ponderosa<br>pine | Douglas-<br>fir | Aspen | Thousand board feet, International 1/4-inch log rule <sup>3/</sup> |  |  |  | Volume      | Percent |
| Apache                | 11,490                     | 1,638               | --                          | 100,406           | 27,007          | --    | --   |  |  |  | 140,541     | 35.1    |
| Coconino              | 10,278                     | 2,718               | --                          | 142,692           | 9,714           | --    | --   |  |  |  | 165,402     | 41.3    |
| Gila                  | 2,271                      | --                  | --                          | 23,265            | 3,032           | --    | --   |  |  |  | 28,568      | 7.2     |
| Graham, Greenlee      | --                         | --                  | --                          | 12,393            | --              | --    | --   |  |  |  | 12,393      | 3.1     |
| Mohave, Pima, Yavapai | 4                          | --                  | 6                           | 1,963             | 28              | --    | --   |  |  |  | 2,001       | .5      |
| Navajo                | 417                        | 84                  | 3                           | 48,640            | 1,515           | 672   | --   |  |  |  | 51,331      | 12.8    |
| Total                 | 24,460                     | 4,440               | 9                           | 329,359           | 41,296          | 672   | --   |  |  |  | 400,236     | 100.0   |
| Percent of total      | 6.1                        | 1.1                 | (4/)                        | 82.3              | 10.3            | .2    | --   |  |  |  | 100.0       |         |

<sup>1/</sup> Includes white, subalpine, and corkbark firs.

<sup>2/</sup> Mexican white pine (*Pinus flexilis* var. *reflexa* Engelman).

<sup>3/</sup> Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

<sup>4/</sup> Less than 0.05 percent.

Table 54. — Mill receipts of saw logs from Colorado timberlands by species and county of origin, 1966

| County                  | Species  |                                     |                     |                                   |                   | All Species |            |                  |
|-------------------------|--|-------------------------------------|---------------------|-----------------------------------|-------------------|-------------|------------|------------------|
|                         | True<br>: firs <sup>1/</sup>   | Engelmann<br>: spruce <sup>2/</sup> | Lodgepole<br>: pine | Ponderosa<br>: pine <sup>3/</sup> | Douglas-<br>: fir | Aspen       | Cottonwood | Volume : Percent |
|                         | — Thousand board feet, International 1/4-inch log rule <sup>4/</sup> — |                                     |                     |                                   |                   |             |            |                  |
| Archuleta               | 860  | 1,327                               | --                  | 6,034                             | 209               | 247         | --         | 8,677 3.4        |
| Chaffee                 | --   | 155                                 | 51                  | 103                               | 129               | --          | --         | 438 .2           |
| Conejos                 | 935  | 5,263                               | --                  | 325                               | 1,928             | --          | --         | 8,451 3.4        |
| Custer, Huerfano        | 357  | 7,661                               | --                  | 1,850                             | 260               | --          | --         | 10,128 4.0       |
| Delta                   | 3  | 2,782                               | --                  | --                                | --                | 174         | --         | 2,959 1.2        |
| Dolores                 | --   | 260                                 | --                  | 3,857                             | --                | --          | --         | 4,117 1.6        |
| Douglas                 | --   | --                                  | --                  | 3,367                             | 1,419             | --          | --         | 4,786 1.9        |
| Eagle                   | 467  | 4,375                               | --                  | --                                | --                | --          | --         | 6,342 2.5        |
| El Paso, Pueblo, Teller | 32   | 5                                   | 1,500               | 1,188                             | 65                | --          | 893        | 2,183 .9         |
| Garfield                | 32   | 766                                 | --                  | --                                | --                | --          | --         | 798 .3           |
| Grand                   | --   | 6,625                               | 5,354               | --                                | --                | --          | --         | 11,979 4.7       |
| Gunnison                | 548  | 12,703                              | 83                  | --                                | 188               | 2,191       | --         | 15,713 6.2       |
| Hinsdale                | 3,032  | 15,928                              | --                  | 4,921                             | 1,230             | 6           | --         | 25,117 10.0      |
| Jackson                 | 38   | 5,893                               | 11,771              | --                                | --                | --          | --         | 17,702 7.0       |
| Jefferson               | --   | --                                  | --                  | 779                               | 260               | --          | --         | 1,039 .4         |
| Lake                    | --   | 110                                 | 38                  | --                                | --                | --          | --         | 148 .1           |
| La Plata                | 1,455  | 16,783                              | --                  | 854                               | 240               | 32          | 2          | 19,366 7.7       |
| Larimer                 | --   | 10,778                              | 7,573               | 337                               | 44                | --          | --         | 18,732 7.4       |
| Las Animas              | --   | --                                  | --                  | 713                               | 26                | 51          | 21         | 811 .3           |
| Mesa                    | --   | 141                                 | --                  | 1,544                             | --                | --          | --         | 1,685 .7         |
| Mineral                 | 5,806  | 18,529                              | --                  | 4,918                             | 905               | --          | --         | 30,158 12.0      |
| Moffat, Routt           | 1,243  | 18,592                              | 6,389               | --                                | --                | --          | --         | 26,224 10.4      |
| Montezuma               | --   | 2,450                               | --                  | 130                               | --                | 2,008       | --         | 4,588 1.8        |
| Montrose                | 114  | 4,403                               | --                  | 4,660                             | 349               | --          | --         | 9,526 3.8        |
| Ouray                   | 34   | 2,563                               | --                  | 38                                | 3                 | 28          | --         | 2,666 1.0        |
| Park                    | --   | 3,522                               | 1,818               | 188                               | --                | --          | --         | 5,528 2.2        |
| Pitkin                  | 390  | 2,089                               | --                  | --                                | --                | --          | --         | 2,479 1.0        |
| Rio Grande              | 41   | 2,163                               | --                  | --                                | --                | --          | --         | 2,204 .9         |
| Saguache                | 612  | 6,277                               | 36                  | 116                               | 168               | --          | --         | 7,209 2.9        |
| San Miguel              | --   | --                                  | --                  | --                                | --                | 392         | --         | 392 .1           |
| Total                   | 15,999   | 152,143                             | 34,613              | 35,922                            | 7,423             | 5,129       | 916        | 252,145 100.0    |
| Percent of total        | 6.4  | 60.3                                | 13.7                | 14.3                              | 2.9               | 2.0         | .4         | 100.0            |

<sup>1/</sup> Includes white, subalpine, and corkbark firs.<sup>2/</sup> Includes blue spruce.<sup>3/</sup> Includes limber pine.<sup>4/</sup> Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.



Table 55. — *Mill receipts of veneer<sup>1</sup> logs from Colorado timberlands by species and county of origin, 1966*

| County  | Species                    |                                   |                   |       | All species |         |
|---|----------------------------|-----------------------------------|-------------------|-------|-------------|---------|
|   | True <sup>2/</sup><br>firs | Engelmann<br>spruce <sup>3/</sup> | Ponderosa<br>pine | Aspen | Volume      | Percent |
| — - Thousand board feet, International 1 <sup>1</sup> / <sub>4</sub> -inch log rule <sup>4/</sup> — - |                            |                                   |                   |       |             |         |
| Dolores   | 1,500                      | 6,276                             | 13,549            | 0     | 21,325      | 64.8    |
| Montezuma   | 1,911                      | 8,525                             | 1,077             | 92    | 11,605      | 35.2    |
| Total   | 3,411                      | 14,801                            | 14,626            | 92    | 32,930      | 100.0   |
| Percent of total  | 10.4                       | 44.9                              | 44.4              | .3    | 100.0       |         |

<sup>1/</sup> Veneer logs used in Colorado are of average saw-log quality.

<sup>2/</sup> Includes white, subalpine, and corkbark firs.

<sup>3/</sup> Includes blue spruce.

<sup>4/</sup> Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.

Table 56. — Output of roundwood products from Colorado timberlands by species and product, 1966

| Product  | Species                      |                                     |                     |                  |                     |                   |                                  |        |         |  | All species |  |
|--|------------------------------|-------------------------------------|---------------------|------------------|---------------------|-------------------|----------------------------------|--------|---------|--|-------------|--|
|  | True <sup>1/</sup><br>: firs | Engelmann<br>: spruce <sup>2/</sup> | Lodgepole<br>: pine | Limber<br>: pine | Ponderosa<br>: pine | Douglas-<br>: fir | Other<br>: species <sup>3/</sup> | Volume | Percent |  |             |  |
|  | Thousand cubic feet          |                                     |                     |                  |                     |                   |                                  |        |         |  |             |  |
| Saw logs                                       | 2,496                        | 23,734                              | 5,400               | 5                | 5,599               | 1,158             | 943                              | 39,335 | 77.3    |  |             |  |
| Veneer logs                                    | 518                          | 2,250                               | 0                   | 0                | 2,223               | 0                 | 14                               | 5,005  | 9.8     |  |             |  |
| Pulpwood                                       | --                           | 27                                  | 174                 | --               | --                  | --                | --                               | 201    | .4      |  |             |  |
| Commercial poles                               | 0                            | 0                                   | 837                 | 0                | 0                   | 0                 | 0                                | 837    | 1.6     |  |             |  |
| Mine timbers                                   | 1                            | 388                                 | 968                 | 0                | 1,210               | 4                 | 3                                | 2,574  | 5.1     |  |             |  |
| Miscellaneous industrial wood <sup>4/</sup>    | 0                            | 26                                  | 3                   | 0                | 0                   | 0                 | 564                              | 593    | 1.2     |  |             |  |
| Posts, fuelwood, miscellaneous<br>farm timbers | --                           | 56                                  | 1,338               | 8                | 306                 | 60                | 566                              | 2,334  | 4.6     |  |             |  |
| Total  | 3,015                        | 26,481                              | 8,720               | 13               | 9,338               | 1,222             | 2,090                            | 50,879 | 100.0   |  |             |  |
| Percent of total                               | 5.9                          | 52.1                                | 17.1                | (5/)             | 18.4                | 2.4               | 4.1                              | 100.0  |         |  |             |  |

<sup>1/</sup> Includes white, subalpine, and corkbark firs.

<sup>2/</sup> Includes blue spruce.

<sup>3/</sup> Includes juniper, pinyon pine, aspen, and cottonwood.

<sup>4/</sup> Includes house logs, excelsior bolts, match stock, and similar items.

<sup>5/</sup> Less than 0.05 percent.

Table 57. — Output of roundwood products from Colorado timberlands by land ownership class and product, 1966

| Product  | Total<br>volume | Land ownership classes |                 |                                  |                  |                   |
|--|-----------------|------------------------|-----------------|----------------------------------|------------------|-------------------|
|  |                 | National<br>Forest     | Other<br>public | Forest<br>industry <sup>1/</sup> | Other<br>private | All<br>ownerships |
|  |                 | —                      | —               | —                                | —                | —                 |
|  | MCF             | —                      | —               | —                                | Percent          | —                 |
| Saw logs                                       | 39,335          | 70.5                   | 4.4             | 0.4                              | 2.0              | 77.3              |
| Veneer logs                                    | 5,005           | 9.8                    | 0               | 0                                | 0                | 9.8               |
| Pulpwood                                       | 201             | .2                     | .1              | 0                                | .1               | .4                |
| Commercial poles                               | 837             | 1.5                    | 0               | 0                                | .1               | 1.6               |
| Mine timbers                                   | 2,574           | 3.8                    | .1              | .1                               | 1.1              | 5.1               |
| Miscellaneous industrial wood <sup>2/</sup>    | 593             | 1.0                    | 0               | 0                                | .2               | 1.2               |
| Posts, fuelwood, miscellaneous<br>farm timbers |                 |                        |                 |                                  |                  |                   |
| Total  | 2,334           | 4.0                    | .2              | (3/)                             | .4               | 4.6               |
|  | 50,879          | 90.8                   | 4.8             | .5                               | 3.9              | 100.0             |

<sup>1/</sup> Lands owned by companies or individuals operating wood-using plants.

<sup>2/</sup> Includes house logs, excelsior bolts, match stock, and similar items.

<sup>3/</sup> Less than 0.05 percent.

# NEVADA

Table 58. — Output of roundwood products from Nevada timberlands by species and product, 1966

| Product  | Species        |                     |                                  |        | All species |         |
|--|----------------|---------------------|----------------------------------|--------|-------------|---------|
|  | White :<br>fir | Ponderosa :<br>pine | Other :<br>species <sup>1/</sup> | Volume | Percent     | Percent |
| Saw logs                                       | 0              | 2                   | 0                                | 2      | 0.9         |         |
| Posts, fuelwood, miscellaneous<br>farm timbers | 23             | 22                  | 176                              | 221    | 99.1        |         |
| Total  | 23             | 24                  | 176                              | 223    | 100.0       |         |
| Percent of total                               | 10.3           | 10.8                | 78.9                             | 100.0  |             |         |

<sup>1/</sup> Includes juniper, pinyon pine, and aspen.

Table 59. — Output of roundwood products from Nevada timberlands by land ownership class and product, 1966

| Product  | Total :<br>volume | Land ownership classes |                   |                    | All :<br>ownerships |
|--|-------------------|------------------------|-------------------|--------------------|---------------------|
|  |                   | National :<br>Forest   | Other :<br>public | Other :<br>private |                     |
| Saw logs                                       | 2                 | 0.9                    | 0                 | 0                  | 0.9                 |
| Posts, fuelwood, miscellaneous<br>farm timbers | 221               | 18.4                   | 34.5              | 46.2               | 99.1                |
| Total  | 223               | 19.3                   | 34.5              | 46.2               | 100.0               |

<sup>1/</sup> No receipts were reported from forest industry lands; i.e., lands owned by companies or individuals operating wood-using plants.

# NEW MEXICO

Table 60. — Mill receipts of saw logs from New Mexico timberlands by species and county of origin, 1966

| County                    | Species  |                                   |                |                |                   |                 |                     |         |         |  | All species |         |
|---------------------------|--|-----------------------------------|----------------|----------------|-------------------|-----------------|---------------------|---------|---------|--|-------------|---------|
|                           | True<br>firs <sup>1/</sup>   | Engelmann<br>spruce <sup>2/</sup> | Pinyon<br>pine | Limber<br>pine | Ponderosa<br>pine | Douglas-<br>fir | Aspen <sup>3/</sup> | Volume  | Percent |  | Volume      | Percent |
|                           | Thousand board feet, International 1/4-inch log rule <sup>4/</sup> |                                   |                |                |                   |                 |                     |         |         |  |             |         |
| Bernalillo                | 515  | 2                                 | --             | --             | 115               | 144             | --                  | 776     | 0.3     |  |             |         |
| Catron                    | 872  | --                                | 114            | --             | 25,199            | 2,566           | --                  | 28,751  | 10.6    |  |             |         |
| Colfax                    | 1,180  | 18,463                            | --             | --             | 8,906             | 7,765           | 599                 | 36,913  | 13.6    |  |             |         |
| Grant                     | --   | --                                | 2              | --             | 602               | --              | --                  | 604     | .2      |  |             |         |
| Los Alamos, Rio Arriba    | 1,012  | 11,057                            | 570            | --             | 24,646            | 3,866           | 597                 | 41,748  | 15.4    |  |             |         |
| McKinley                  | --   | 61                                | --             | --             | 37,292            | 3,874           | --                  | 41,227  | 15.2    |  |             |         |
| Mora                      | 29   | 285                               | --             | --             | 221               | 540             | --                  | 1,075   | .4      |  |             |         |
| Otero                     | 4,424  | 37                                | --             | 992            | 6,988             | 7,036           | --                  | 19,477  | 7.2     |  |             |         |
| Sandoval                  | 5,327  | 14,716                            | --             | 580            | 30,634            | 23,596          | --                  | 74,853  | 27.5    |  |             |         |
| San Miguel                | 2,281  | --                                | --             | 110            | 5,028             | 2,851           | --                  | 10,270  | 3.8     |  |             |         |
| Sierra, Socorro, Torrance | --   | --                                | --             | 102            | 2,550             | 426             | --                  | 3,078   | 1.1     |  |             |         |
| Taos                      | 10   | 1,625                             | --             | --             | 1,356             | 1,356           | 3,256               | 7,603   | 2.8     |  |             |         |
| Valencia                  | --   | --                                | 742            | --             | 4,233             | 135             | --                  | 5,110   | 1.9     |  |             |         |
| Total                     | 15,650   | 46,246                            | 1,428          | 1,784          | 147,770           | 54,155          | 4,452               | 271,485 | 100.0   |  |             |         |
| Percent of total          | 5.8  | 17.0                              | .5             | .7             | 54.4              | 20.0            | 1.6                 | 100.0   |         |  |             |         |

<sup>1/</sup> Includes white, subalpine, and corkbark firs.

<sup>2/</sup> Includes blue spruce.

<sup>3/</sup> Includes a small volume of cottonwood.

<sup>4/</sup> Scribner log rule volumes can be approximated by multiplying table volumes by 0.89.



Table 61. — Output of roundwood products from New Mexico timberlands by species and product, 1966

| Product  | Species                         |                                       |                    |                       |                   |                                    | All species |         |
|--|---------------------------------|---------------------------------------|--------------------|-----------------------|-------------------|------------------------------------|-------------|---------|
|  | True <sup>1/</sup> :<br>: firs  | Engelmann :<br>: spruce <sup>2/</sup> | Limber :<br>: pine | Ponderosa :<br>: pine | Douglas-<br>: fir | Other :<br>: species <sup>3/</sup> | Volume      | Percent |
|  | ----- Thousand cubic feet ----- |                                       |                    |                       |                   |                                    | -----       | -----   |
| Saw logs                                       | 2,442                           | 7,214                                 | 278                | 23,052                | 8,448             | 918                                | 42,352      | 83.1    |
| Mine timbers                                   | --                              | --                                    | --                 | 81                    | --                | 155                                | 236         | .5      |
| Posts, fuelwood, miscellaneous<br>farm timbers | --                              | --                                    | --                 | 1,914                 | 122               | 6,362                              | 8,398       | 16.4    |
| Total  | 2,442                           | 7,214                                 | 278                | 25,047                | 8,570             | 7,435                              | 50,986      | 100.0   |
| Percent of total                               | 4.8                             | 14.2                                  | .5                 | 49.1                  | 16.8              | 14.6                               | 100.0       |         |

<sup>1/</sup> Includes white, subalpine, and corkbark firs.

<sup>2/</sup> Includes blue spruce.

<sup>3/</sup> Includes juniper, pinyon pine, aspen, and cottonwood.

Table 62. — Output of roundwood products from New Mexico timberlands by land ownership class and product, 1966

| Product  | Total<br>volume | Land ownership classes |                 |                    |                  |                   |       | Percent |   |
|--|-----------------|------------------------|-----------------|--------------------|------------------|-------------------|-------|---------|---|
|  |                 | National<br>Forest     | Other<br>public | Forest<br>industry | Other<br>private | All<br>ownerships |       |         |   |
|  |                 |                        |                 |                    |                  |                   |       |         |   |
|  | - MCF -         | -                      | -               | -                  | -                | -                 | -     | -       | - |
| Saw logs                                       | 42,352          | 43.3                   | 5.0             | 11.8               | 23.0             |                   | 83.1  |         |   |
| Mine timbers                                   | 236             | .4                     | .1              | --                 | (2/)             |                   | .5    |         |   |
| Posts, fuelwood, miscellaneous<br>farm timbers | 8,398           | 7.6                    | .8              | 2.1                | 5.9              |                   | 16.4  |         |   |
| Total  | 50,986          | 51.3                   | 5.9             | 13.9               | 28.9             |                   | 100.0 |         |   |

<sup>1/</sup> Lands owned by companies or individuals operating wood-using plants.

<sup>2/</sup> Less than 0.05 percent.

# UTAH

Table 63. — Mill receipts of saw logs from Utah timberlands by species and county of origin, 1966

| County                | Species   |                         |                       |                       |                     |         |                           |          |           |           | All species |           |
|-----------------------|---|-------------------------|-----------------------|-----------------------|---------------------|---------|---------------------------|----------|-----------|-----------|-------------|-----------|
|                       | : True<br>: fir <sup>1</sup>  | : Engelmann<br>: spruce | : Lodgepole<br>: pine | : Ponderosa<br>: pine | : Douglas-<br>: fir | : Aspen | : Cottonwood <sup>2</sup> | : Volume | : Percent | : Percent | : Volume    | : Percent |
|                       | ----- Thousand board feet, International 1/4-inch log rule <sup>3</sup> ----- |                         |                       |                       |                     |         |                           |          |           |           | -----       | -----     |
| Beaver, Iron, Millard | 14  | 231                     | --                    | --                    | --                  | --      | 4                         | 249      | 0.3       |           |             |           |
| Cache, Rich           | --  | 68                      | 22                    | --                    | 79                  | --      | 1                         | 170      | .2        |           |             |           |
| Carbon, Emery         | --  | --                      | --                    | 56                    | 227                 | 141     | --                        | 424      | .5        |           |             |           |
| Daggett               | --  | --                      | 184                   | 303                   | 302                 | --      | --                        | 789      | 1.0       |           |             |           |
| Duchesne              | --  | 2,083                   | 2,729                 | 3,963                 | --                  | --      | 86                        | 8,861    | 11.4      |           |             |           |
| Garfield              | 2,719   | 7,224                   | --                    | 12,698                | 1,811               | --      | --                        | 24,452   | 31.5      |           |             |           |
| Kane                  | 17  | --                      | --                    | 1,556                 | 133                 | --      | --                        | 1,706    | 2.2       |           |             |           |
| San Juan              | --  | --                      | --                    | 24,990                | --                  | --      | --                        | 24,990   | 32.1      |           |             |           |
| Sanpete               | 5   | 281                     | --                    | --                    | --                  | 462     | 5                         | 753      | 1.0       |           |             |           |
| Sevier                | --  | --                      | --                    | --                    | --                  | 327     | --                        | 327      | .4        |           |             |           |
| Summit                | 251   | 1,159                   | 2,118                 | --                    | 310                 | --      | 22                        | 3,860    | 5.0       |           |             |           |
| Uintah                | --  | 1,408                   | 4,051                 | 202                   | --                  | --      | 226                       | 5,887    | 7.6       |           |             |           |
| Utah                  | 170   | --                      | --                    | --                    | 56                  | --      | 56                        | 282      | .4        |           |             |           |
| Wasatch               | --  | 2,203                   | 346                   | --                    | 22                  | 169     | 791                       | 3,531    | 4.5       |           |             |           |
| Wayne                 | --  | 485                     | --                    | 848                   | 56                  | 80      | --                        | 1,469    | 1.9       |           |             |           |
| Total                 | 3,176   | 15,142                  | 9,450                 | 44,616                | 2,996               | 1,179   | 1,191                     | 77,750   | 100.0     |           |             |           |
| Percent of total      | 4.1   | 19.5                    | 12.2                  | 57.4                  | 3.8                 | 1.5     | 1.5                       | 100.0    |           |           |             |           |

<sup>1</sup>/ Includes white and subalpine firs.

<sup>2</sup>/ Includes other hardwoods and a small amount of juniper.

<sup>3</sup>/ Scribner log rule volumes can be approximated by multiplying table values by 0.89.

Table 64. — Output of roundwood products from Utah timberlands by species and product, 1966

| Products   | Species                       |                       |                     |                     |                   |                    |                 | All species |         |
|--|-------------------------------|-----------------------|---------------------|---------------------|-------------------|--------------------|-----------------|-------------|---------|
|  | True <sup>1</sup> /<br>: firs | Engelmann<br>: spruce | Lodgepole<br>: pine | Ponderosa<br>: pine | Douglas-<br>: fir | Other<br>: species | 2/<br>: species | Volume      | Percent |
|  | Thousand cubic feet           |                       |                     |                     |                   |                    |                 |             |         |
| Saw logs   | 496                           | 2,362                 | 1,474               | 6,960               | 467               | 370                |                 | 12,129      | 86.5    |
| Mine timbers   | 2                             | 40                    | 394                 | 5                   | 12                | 2                  |                 | 455         | 3.2     |
| Miscellaneous industrial wood <sup>3/</sup>                  | 26                            | 210                   | 342                 | 0                   | 0                 | 157                |                 | 735         | 5.2     |
| Posts, fuelwood, miscellaneous<br>farm timbers <sup>4/</sup> | 0                             | 7                     | 306                 | 11                  | 6                 | 381                |                 | 711         | 5.1     |
| Total  | 524                           | 2,619                 | 2,516               | 6,976               | 485               | 910                |                 | 14,030      | 100.0   |
| Percent of total   | 3.7                           | 18.7                  | 17.9                | 49.7                | 3.5               | 6.5                |                 | 100.0       |         |

<sup>1/</sup>Includes white and subalpine firs.

<sup>2/</sup>Includes juniper, pinyon pine, aspen, cottonwood, and other hardwoods.

<sup>3/</sup>Includes converter poles, excelsior bolts, and similar items.

<sup>4/</sup>Includes volume of commercial poles to avoid disclosure of individual operations.

Table 65. — Output of roundwood products from Utah timberlands by land ownership class and product, 1966

| Product  | Total<br>volume | Land ownership classes |           |           |           |
|--|-----------------|------------------------|-----------|-----------|-----------|
|  |                 | National               | Other     | Other     | All       |
|  |                 | Forest                 | public    | private   | ownships  |
|  | - MCF -         | - - - - -              | - - - - - | - - - - - | - - - - - |
| Saw logs   | 12,129          | 78.7                   | 4.0       | 3.8       | 86.5      |
| Mine timbers   | 455             | 3.1                    | (2/)      | .1        | 3.2       |
| Miscellaneous industrial wood <sup>3/</sup>                  | 735             | 3.7                    | 0         | 1.5       | 5.2       |
| Posts, fuelwood, miscellaneous<br>farm timbers <sup>4/</sup> | 711             | 4.4                    | .1        | .6        | 5.1       |
| Total  | 14,030          | 89.9                   | 4.1       | 6.0       | 100.0     |

<sup>1/</sup> No receipts were reported from forest industry lands; i.e., lands owned by companies or individuals operating wood-using plants.

<sup>2/</sup> Less than 0.05 percent.

<sup>3/</sup> Includes converter poles, excelsior bolts, and similar items.

<sup>4/</sup> Includes volume of commercial poles to avoid disclosure of individual operations.

# MAPS

Major Timber Industries in the  
Rocky Mountain States

Saw Log Output by Counties, 1966,  
Rocky Mountain States





IN THE

# ROCKY MOUNTAIN STATES

INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION  
FOREST SURVEY

U.S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE



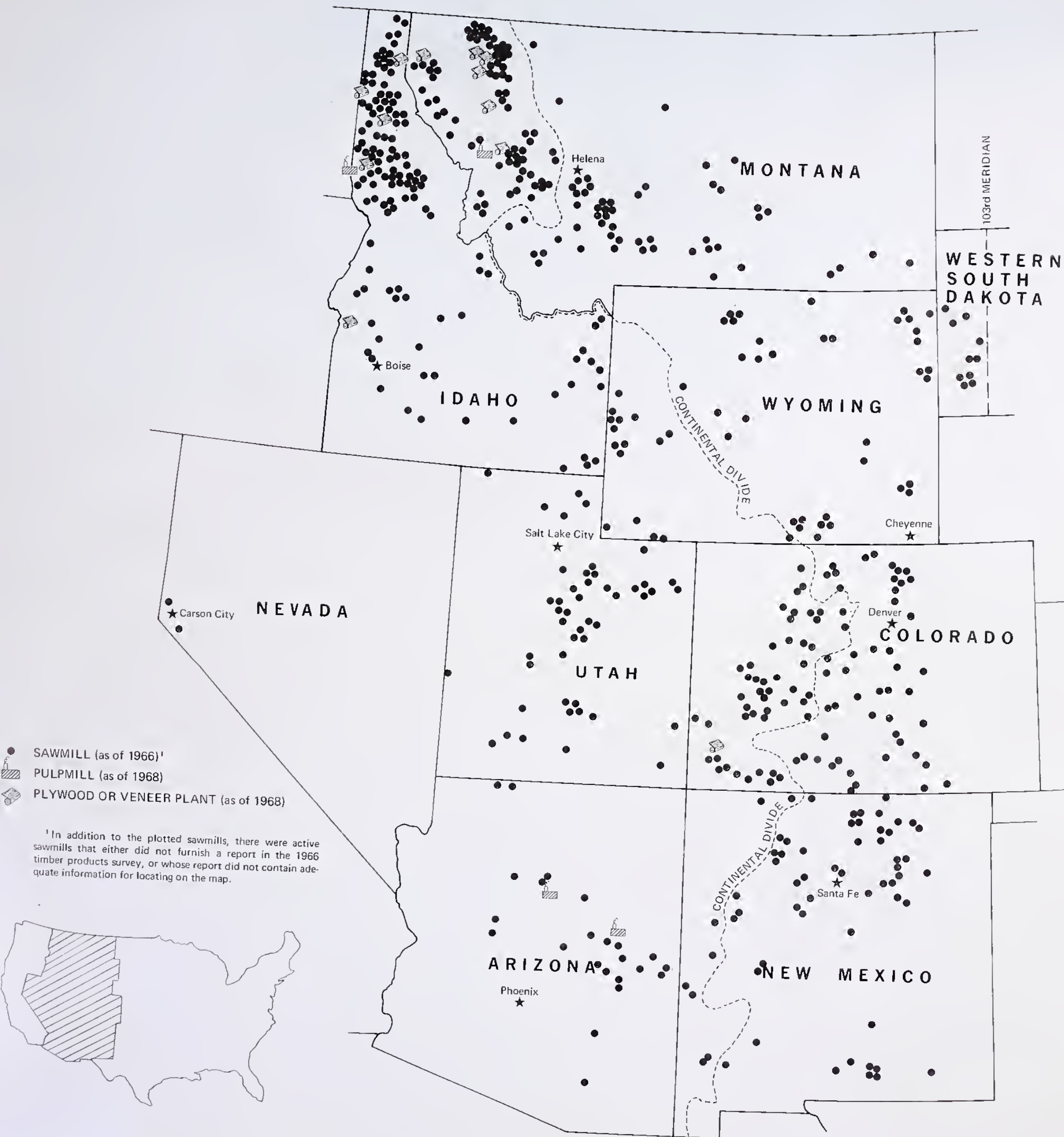


MAJOR TIMBER INDUSTRIES  
IN THE  
**ROCKY MOUNTAIN STATES**

INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION

FOREST SURVEY

U.S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE







SAW LOG OUTPUT

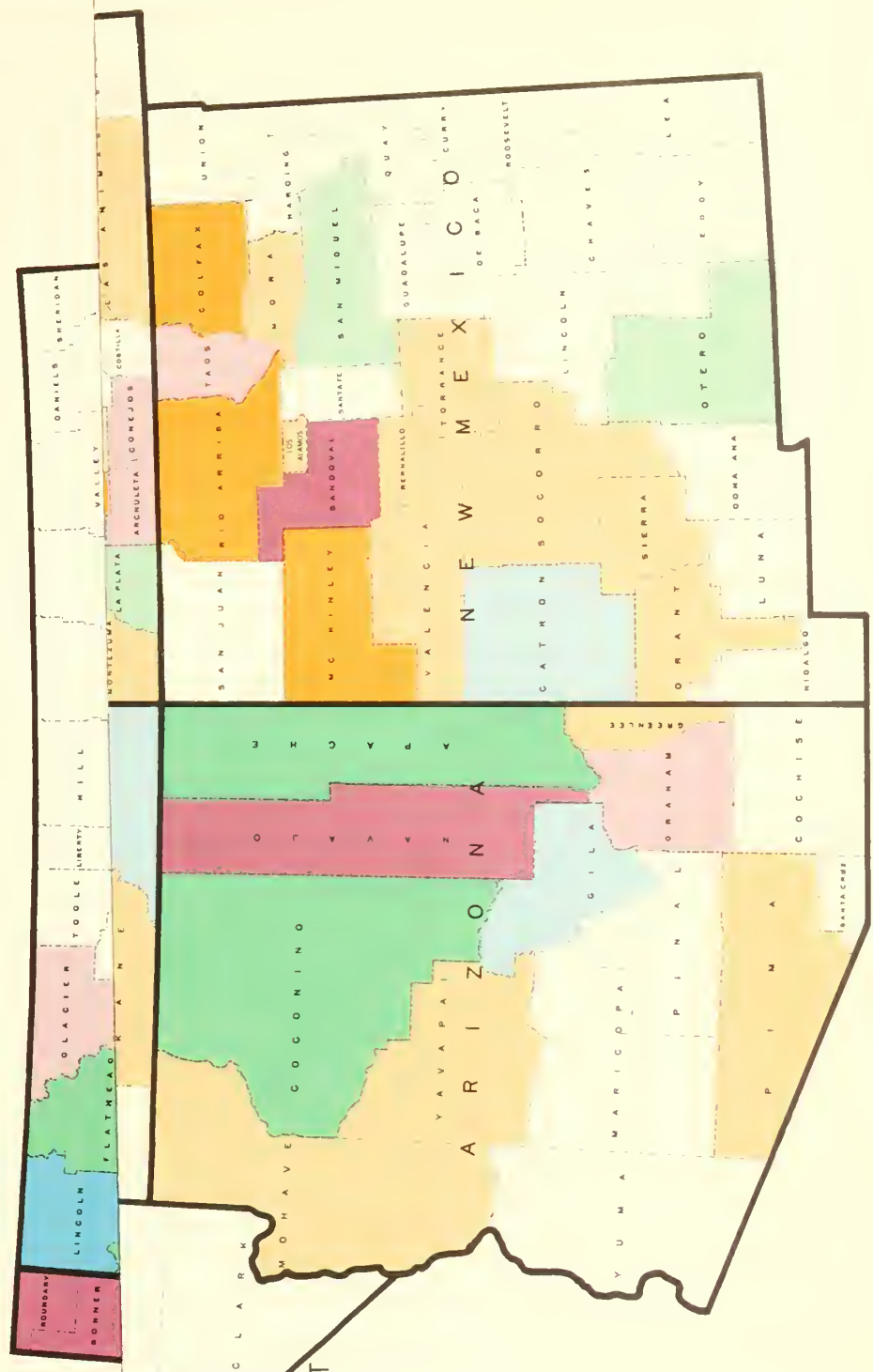
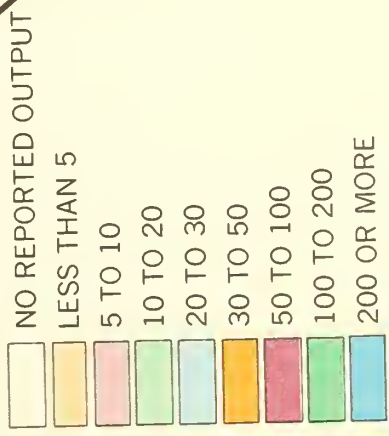
# ROCKY MOUNTAIN STATES

## INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION

FOREST SURVEY

U.S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE

SAW LOG OUTPUT  
(MILLION BOARD FEET,  
INTL. 1/4" RULE)

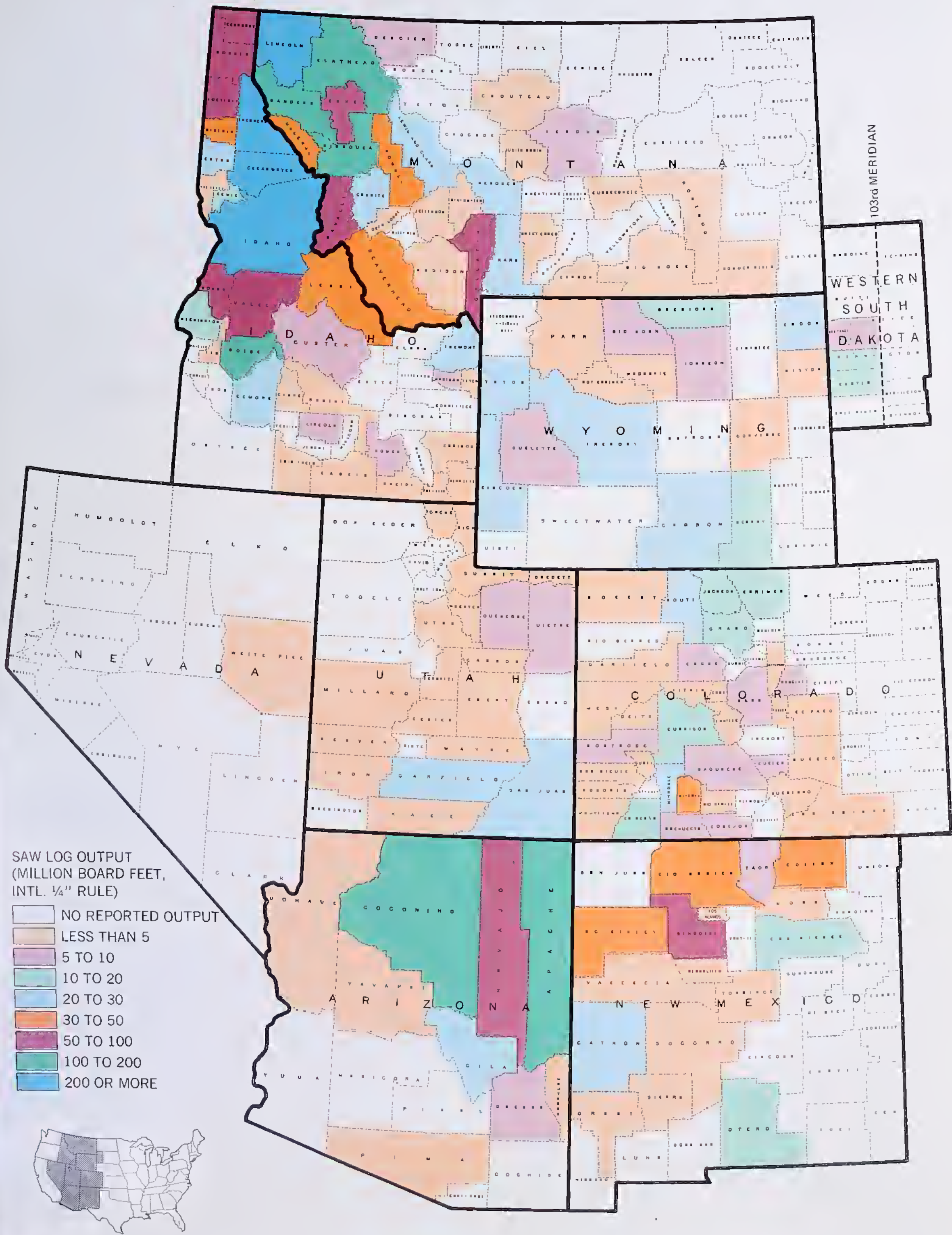




## ROCKY MOUNTAIN STATES

FOREST SURVEY

U.S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE





Headquarters for the Intermountain Forest and  
Range Experiment Station are in Ogden, Utah.  
Field Research Work Units are maintained in:

Boise, Idaho

Bozeman, Montana (in cooperation with  
Montana State University)

Logan, Utah (in cooperation with Utah  
State University)

Missoula, Montana (in cooperation with  
University of Montana)

Moscow, Idaho (in cooperation with the  
University of Idaho)

Provo, Utah (in cooperation with  
Brigham Young University)



## ABOUT THE FOREST SERVICE . . .

As our Nation grows, people expect and need more from their forests — more wood; more water, fish, and wildlife; more recreation and natural beauty; more special forest products and forage. The Forest Service of the U.S. Department of Agriculture helps to fulfill these expectations and needs through three major activities:



- Conducting forest and range research at over 75 locations ranging from Puerto Rico to Alaska to Hawaii.
- Participating with all State forestry agencies in cooperative programs to protect, improve, and wisely use our Country's 395 million acres of State, local, and private forest lands.
- Managing and protecting the 187-million acre National Forest System.

The Forest Service does this by encouraging use of the new knowledge that research scientists develop; by setting an example in managing, under sustained yield, the National Forests and Grasslands for multiple use purposes; and by cooperating with all States and with private citizens in their efforts to achieve better management, protection, and use of forest resources.

Traditionally, Forest Service people have been active members of the communities and towns in which they live and work. They strive to secure for all, continuous benefits from the Country's forest resources.

For more than 60 years, the Forest Service has been serving the Nation as a leading natural resource conservation agency.